

# RAILWAY AGE

OCTOBER 25, 1947

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1947

ELECTRO-MOTIVE

*The 25th Anniversary  
of a Young Pioneer*

(See Electro-Motive Advertisement Inside)

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LOCOMOTIVES

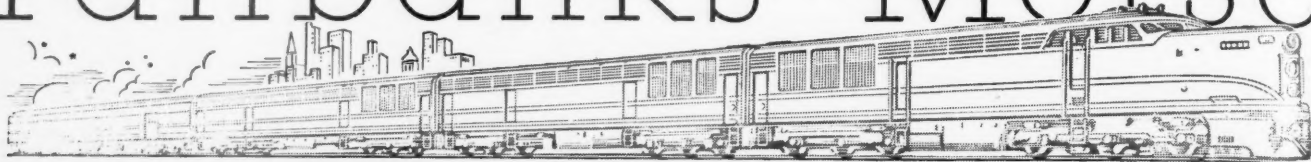
ELECTRO-MOTIVE DIVISION

World's Largest Builder of Locomotives

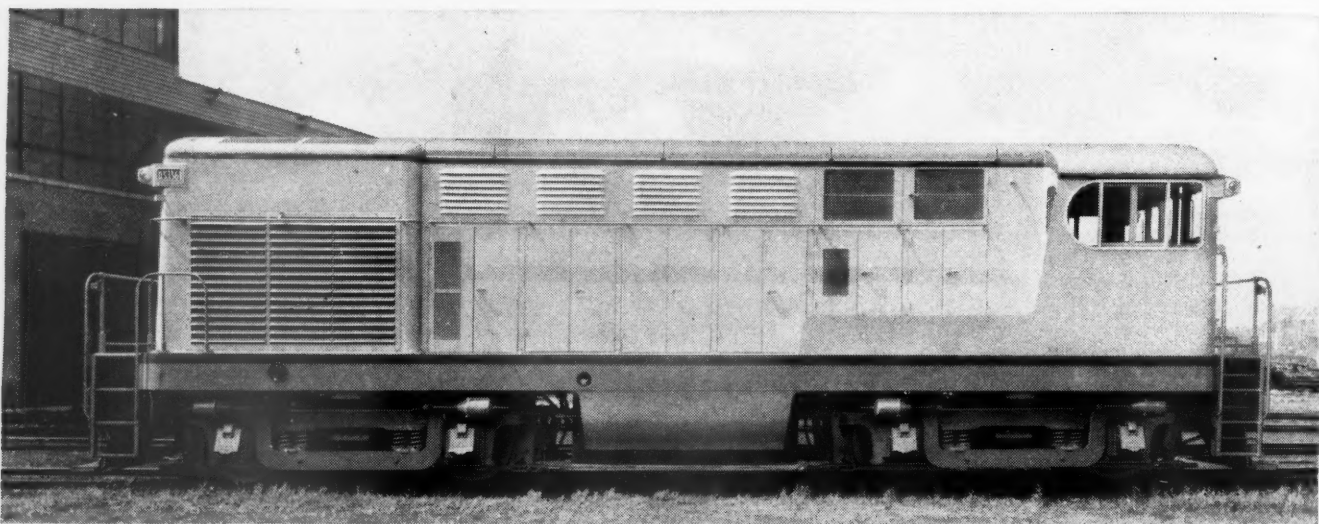
GENERAL MOTORS

LA GRANGE, ILL.

# Fairbanks-Morse



## FAIRBANKS-MORSE RECEIVES FIRST ORDER FROM AC & Y FOR 4 DIESELS



### *Impressed by Demonstration Runs, Railway Signs for 2,000-hp. Heavy-Duty Locomotives*

Recent performance tests and demonstration runs of Fairbanks-Morse 2,000-hp. "heavy-duty" diesel locomotives on Akron, Canton & Youngstown Railway tracks have been an important contributing factor in that line's decision to order four of the locomotives.

It is the first order placed with Fairbanks-Morse by AC&Y.

The locomotives will be employed for heavy-duty freight service and will, on occasion, be operated in multiple units of two—thus making up two diesel locomotives, each developing 4,000-hp.

Designed especially for heavy-duty service, the 2,000-hp. locomotive has been termed the "most powerful diesel locomotive ever built on four pairs of wheels." It is the result of efforts to produce a locomotive with the greatest possible horsepower, and having all the weight on the drivers (total of 4 axles)—thus permitting greater tractive effort. It is ideally suited for heavy-duty freight, transfer and switching service.

As in all Fairbanks-Morse locomotives, the 2,000-hp. units are powered by the famed opposed-piston diesel engine which has no cylinder

heads, no valves, no valve-activating mechanisms. Its design is so simplified that there are approximately 40 per cent fewer wearing parts.

Thus, this engine contributes materially to low maintenance and operating costs, plus high availability—important benefits in modern-day railroading. It has vertical cylinders of 2-stroke design, operating on a principle of two pistons in each cylinder, driven apart by a central explosion. Each cylinder develops 200 horsepower, thus it is an extremely powerful engine for its size and weight. The engine's operating economy and dependability have been proved by substantially more than 3½-million horsepower in active service.

*Fairbanks-Morse: a name worth remembering.*

FOR FURTHER INFORMATION ON FAIRBANKS-MORSE DIESEL LOCOMOTIVES, PHONE, WIRE, OR WRITE RAILROAD DIVISION,  
FAIRBANKS, MORSE & CO., FAIRBANKS-MORSE BLDG., CHICAGO 5, ILLINOIS

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PRINTED IN U. S. A.

FOR SINGLE SWITCH  
WITH OR WITHOUT DERAIL . . .

**"UNION"**

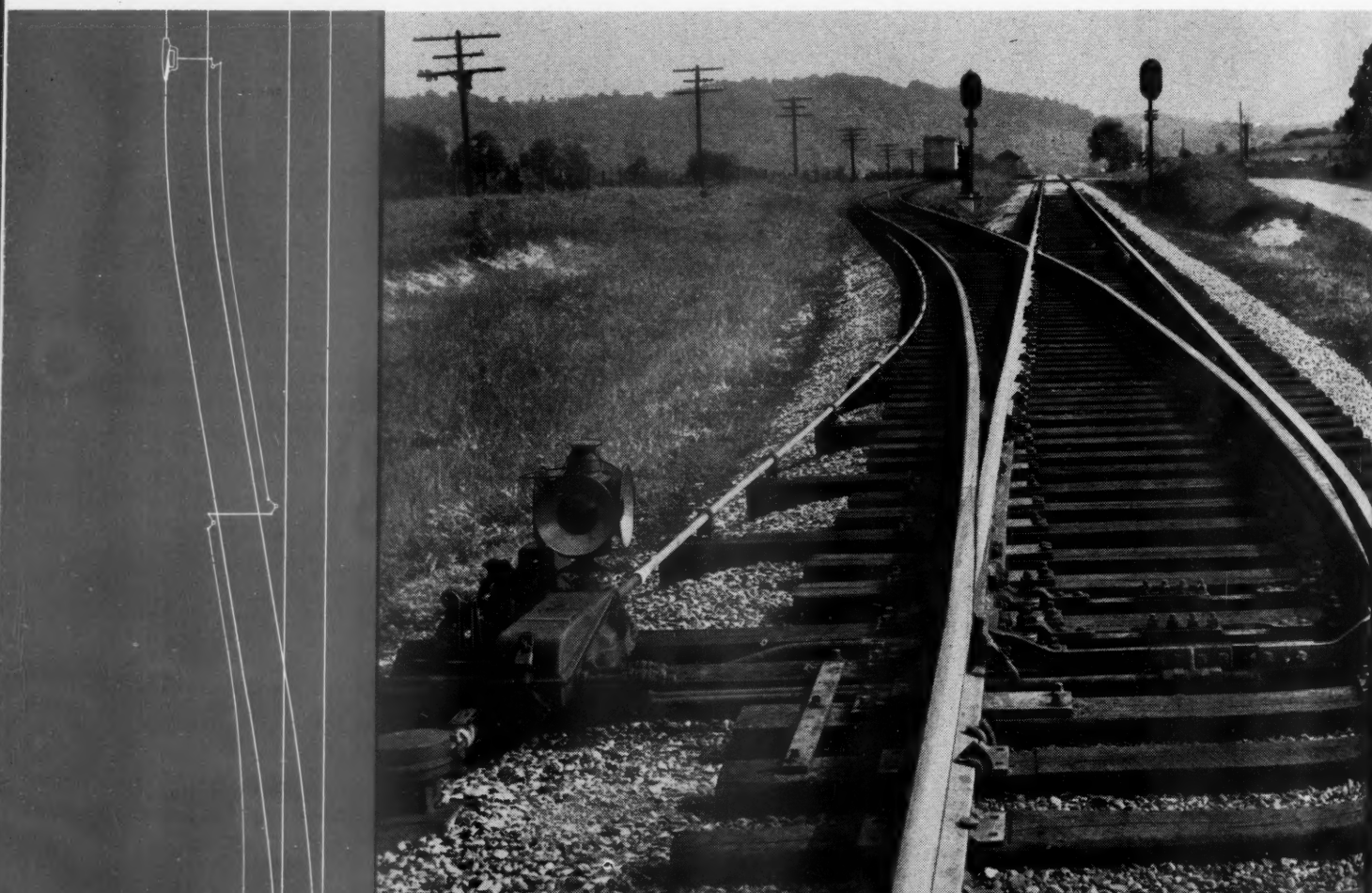
# Switch Stands

"Union" T-20 and T-21 Switch Stands are more than devices merely for throwing switches . . . they provide protection equivalent to that of interlocked switches.

Their design incorporates these additional features: a standard *lock rod* which mechanically locks the switch in the normal position . . . a self contained *circuit controller* which checks that the switch is in the correct position and

locked . . . and, a separate *point-detector rod* operating the same circuit controller for continuously checking that the points remain in the proper position.

Where a derail is required, as illustrated, the derail is operated by means of a pipe connection from the lock bar of the Switch Stand. And electric locking may be conveniently and effectively applied to either the T-20 or T-21.



**UNION SWITCH & SIGNAL COMPANY**

SWISSVALE

NEW YORK

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# The Week at a Glance

**BULL'S EYE:** The railroads' recent newspaper advertisement—showing how the train service brotherhoods are demanding the addition of 15 useless "sitters" to the five-man crew of a train powered by a four-unit Diesel—seems to have hit the bull's eye. It has been acclaimed by the public while provoking deprecatory rejoinders from union leaders. This issue's leading editorial discusses the advertisement's effectiveness as an example of successful communication to the public of the problems facing railroad management. Provision of a system of communication which will explain problems and policies understandably to employees and the public is a prime function of management. The way to do it with dependable effectiveness has not yet been mastered; but the success of the "sitters" ad proves that it can be done—, for there was a communication victory on one of the most complex and stubbornly elusive problems confronting the railroads.

**TRAINING TRAFFIC MEN:** The Baltimore & Ohio has embarked upon an extensive training program to equip its freight traffic organization to do a superior selling job. The training plan, described in an article on page 41, is of special interest because it involves an "on track" familiarization program for a portion of the staff (particularly those assigned to off-line offices) which gets little opportunity to see or ride the line. Each freight-service salesman in the training program participated in two two-week courses, each course covering a different territory. The courses are not scheduled consecutively, and thus no one is away from regular duties for more than two weeks at a time.

**LOAD-COMPENSATING BRAKE:** The load-compensating brake was the subject of an article which appeared in the *Railway Age* of December 20, 1944. Many months of design and study, followed by experimental installations on non-interchange cars, have since resulted in the production of much simpler equipment. And this has been installed on 400 new Illinois Central hopper cars which will soon enter regular interchange service. C. D. Stewart, vice-president of the Westinghouse Air Brake Company, describes the equipment in one of this issue's illustrated feature articles.

**CHIDING FOR I. C. C.:** Chairman Aitchison of the I. C. C. on October 9 wrote to Chief Justice Vinson of the Supreme Court, saying that if the court were to grant pending petitions for review of the Rock Island case the commission was prepared to reconsider the reorganization plan for that road. The Aitchison letter was made public on October 14 by Senator Reed of Kansas who announced, at the same time, an indefinite postponement of hearings in connection with the investigation of the commission's administration of railroad reorganizations which is being conducted by a Senate interstate commerce subcommittee under his chairmanship. The court at its October 20 session denied the

petitions for review, the effect of its action being to require lower-court approval of the revamp plan as previously approved by the commission. In an opinion explaining why he concurred in the court's denial order, Justice Rutledge chided the commission about the Aitchison letter, saying it had made the situation "highly embarrassing" without offering any aid. Meanwhile Senator Hawkes of New Jersey had issued a statement condemning Senator Reed's tactics; and Representative Walter of Pennsylvania had told Chairman Aitchison that the letter to Chief Justice Vinson was "unprecedented and impertinent." More details in a news story herein.

**FOREIGN-RELIEF JOB:** Railroad transportation controls, such as O. D. T.'s minimum-loading orders and I. C. C. service orders designed "to extract maximum utilization" out of freight cars, should be continued at least until "late in 1948," says a report on "National Resources and Foreign Aid" which President Truman has received from Secretary of Interior Krug. The report, reviewed back in the News department, finds generally that the nation's economy is physically capable of providing for a "considerable" program of foreign aid. Of the railroad situation, it says that the car shortage will not be as "critical" next fall as it now is if production in 1948 approaches the 10,000-per-month goal. Meanwhile, the railroads are urged to explore the possibilities of getting more use out of present equipment "by modification of operating practices."

**CAR ORDERS AND OUTPUT:** The report also advises that the railroads should place in service a "minimum" of 180,000 freight cars per year for the next five years if they are to be "in a safe position to take care of our expanding domestic needs and export requirements." While the report, as it says, does not examine "the reasons why new freight cars are not being ordered at a higher rate," its discussion of equipment production nevertheless includes the finding that "new cars are not being ordered at the rate which would appear justified in view of increased retirements of worn-out cars and the normal growth in volume of traffic." There also is found an assertion that "although the car builders claim facilities for production of 204,000 freight cars yearly, they are still struggling, with the aid of special allocations, to attain a rate of 120,000 a year."

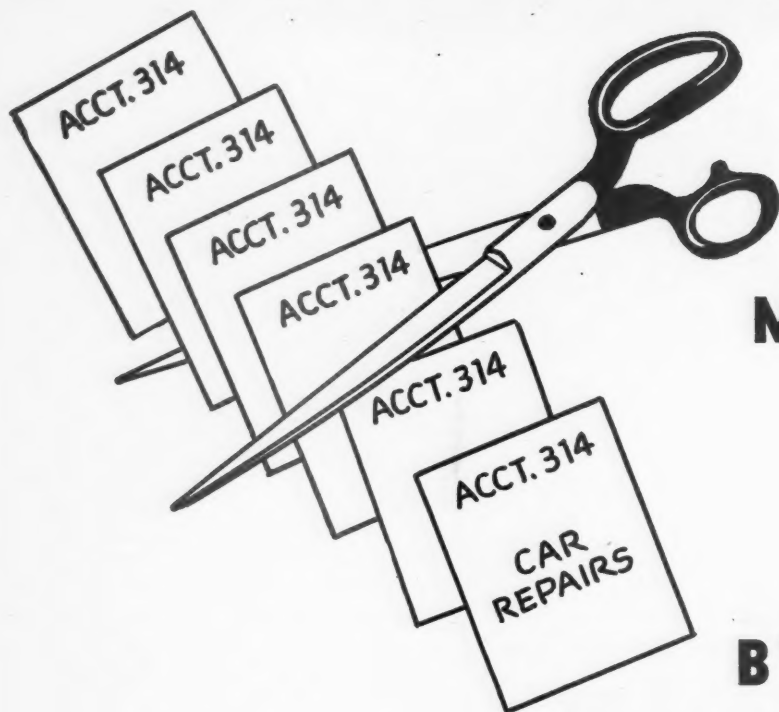
**RESEARCH CENTER:** The Johns-Manville Corporation has recently placed in operation the first laboratory and pilot plant in the research center which it is developing near Manville, N. J. The facilities, described in an illustrated feature article on page 42, are fitted with the most modern and up-to-date equipment. Johns-Manville's experience points up the value of intensive industrial research; 56 per cent of the company's present sales are due to new or improved products introduced since 1928.

**INSOLVENCY THREAT:** Awards by the I. C. C. of reparations sought in Department-of-Justice complaints against rates on government shipments during World War II would "destroy the solvency of a large majority of the railroads," says a carrier brief filed with the commission. The brief assails the Justice Department's opposition to consolidation of the complaints into one proceeding, calling it a tactic designed to preclude a showing as to the potential impact of the reparations claims which aggregate approximately three billion dollars. The railroads' net income, during the 1941-45 period, when the government traffic moved, totaled only \$3.4 billion. A news story herein reports more of the brief's argument, and it also reports that two more complaints came along from the Department of Justice at about the same time.

**ELECTRICAL MEETINGS:** Electrical sections of the A. A. R.'s Engineering and Mechanical divisions recently held their annual meetings at Chicago. Reports were considered by the Engineering Division's section on such subjects as power supply, overhead line construction, illumination, and corrosion-resisting materials; while the Mechanical Division's section was concerned with such matters as automotive and electric rolling stock, electric welding, motors and control, locomotive and car equipment, air conditioning, and radio and other communication systems. The Railway Electric Supply Manufacturers Association was also in session at Chicago. A report appears on page 44.

**TIES DESERVE STUDY:** C. A. Rishell, director of research for the National Lumber Manufacturers Association, thinks the wood crosstie might be greatly improved if it were subjected to systematic research. And he is fearful that, unless this is done, other materials will come along to give the wood tie much competition in the future. As Mr. Rishell appraises the potential benefits, a research program for ties would be mutually advantageous to the railroads and the lumber industry. Thus his suggestion, set out in an illustrated feature article on page 49, that the cost of such a program be borne jointly by the two industries.

**P. T. O.s ON TOES:** Members of the American Association of Passenger Traffic Officers, meeting last week at Asheville, N. C., carried out an intensive program of reports and discussion featuring new services and the latest tricks of rival agencies of transport. They also heard addresses by Presidents E. E. Norris, of the Southern, and C. R. Harding, of the Pullman Company; and went on record in favor of a permanent research body to study passenger traffic possibilities and to promote the idea of bringing the regulation of all modes of transport under the jurisdiction of one federal agency. Albert Cotsworth, Jr., the Burlington's passenger traffic manager, is the association's new president. Our story of the meeting is on page 52.



**MAINTENANCE  
COSTS  
CUT  
BY EQUIPPING  
FREIGHT CARS WITH**

**"Standard"  
PRODUCTS**

**DIAGONAL PANEL ROOF  
IMPROVED DREADNAUGHT ENDS  
UNCOUPLING DEVICE  
METAL FLOOR PROTECTOR  
COUPLER CARRIER & CENTERING DEVICE  
W-SECTION SIDE PLATES**

**KEEP MODERN WITH  
"STANDARD" PRODUCTS**



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## RAILWAY AGE

### *Improved Communication with Employees and the Public*

The railroads' recent newspaper advertisement—showing graphically how the train service brotherhoods are striving to force the addition of 15 useless “sitters” to the five-man crew of a train powered by a four-unit Diesel locomotive—seems to have hit the bull's eye, to judge not only from the public's acclaim but from the deprecatory rejoinders the advertisement has provoked from some of the union leaders. High-powered broadcasting is a waste of money unless it is done in the wavelengths the receiving sets can handle. This “15 sitters” advertisement went out in a wave-band of common understanding to which Mr. John Q. Citizen keeps regularly tuned.

A victory in successful *communication* of the problems facing railroad management, in terms touching the interests of railroad employees and the public alike, is a victory indeed—because none of the multitude of complex problems confronting the railroads is more important and more stubbornly elusive than this one. Indeed, it could be truthfully asserted that most of the headaches which have plagued the railroads for fifteen years would vanish with the discovery and adoption of a dependable method of awakening public and employee realization of the extent to which managements objectives are really parallel to long-run employee and public interest.

#### Appeal to Common Sense

If management could find out a reliable means of explaining to the public in terms of its own comprehension such things as an adequate rate level and the evils of socialist invasion of transportation by subsidies, then these vexing and perennial difficulties would rapidly subside. Similarly, union demands for “featherbed” rules and a wage level higher than the traffic will bear would certainly be minimized, if union members knew as well as management knows how these demands work,

in the long run, against both employment and lasting wage increases. Such questions do not lie exclusively in the field of economics—but involve ethical and patriotic motives and plain common-sense. Maybe they could be more successfully explained if aspects other than the economic were more often emphasized. For example, the appeal of the “15 sitters” advertisement was certainly as much to the reader's common-sense and to his sense of justice and the ridiculous as it was to his pocket-book nerve.

#### Communication Plan a Management Necessity

Chester I. Barnard, president of the New Jersey Bell Telephone Company, in his classic analysis, “The Functions of the Executive”, names the provision of a *system of communication* as the first of the three principal functions of management. A pioneer in the scientific study of the behavior of people in industry\* says that the difficulty which individuals and groups find in communicating ideas and feelings to each other “is, beyond all reasonable doubt, the outstanding defect that civilization is facing today.” Since this problem is both extremely difficult and of vital importance, it ought to be getting more determined and systematic attention than it usually receives.

Management's conscience is clear regarding the job it is trying to do. It is trying to give the public the kind of service it demands and is striving to divide what the public pays for that service among all contributors in a manner to keep all of them interested in continuing to participate. If what the public pays for service is insufficient to compensate all those whose efforts are needed to continue the service, at a rate high enough to assure their further collaboration, then it is management's duty *to the public itself* to try to persuade it to

\* Elton Mayo in “Social Problems of an Industrial Civilization” (Harvard Business School).

pay more for the service. Similarly, if one group of contributors to the service (employees, for instance) insists on getting such a large share of the total proceeds that there is not enough left to induce the participation of other equally necessary contributors (investors, for instance)—then it becomes management's duty to resist such demands, *even in the interest of those who insist on being overpaid*. Nobody who is part of an enterprise can prosper if the enterprise itself folds up, and whatever action or policy management adopts to insure the successful continuance of a business is in the interest of all the participators—whether they appreciate that fact or not. But finding means of inducing such appreciation is one of management's principal obligations.

The work done by a single department or individual employee has no value by itself, because the public will not buy it. Only when the work of enginemen and machinists and section hands and traffic solicitors and accountants is put together by management in a manner to result in the movement of a trainload of passengers or freight from one point to another has anything valuable been done, which can be sold so that there will be money with which to pay the wages of the individual employees whose efforts are worth something *only when combined* with those of others.

The individual or department, however, usually has its eye, not on the completed article which the public is willing to pay for, but rather, on its own immediate job. So the reasonableness of some of the policies and orders emanating from management are hard for the individual employees and separate departments to understand.

Unless these orders and policies are carried out, though, the business can have little or nothing which it can sell—and, if that happens, it won't be able to hire people and pay them good wages, and service to the public will dwindle.

### Must Learn to Explain Policies

Management has not yet learned how to explain these things understandably to subordinates and to the public which pays the rates and dictates the laws—and in that *difficulty of communication* lies the greatest danger, alike to the railroads and to the continuance of prosperity and freedom in America. But because the way to interpret such questions with dependable effectiveness hasn't yet been mastered is no sign that it cannot be or will not be. Hopeful discoveries in the right direction are steadily being made, as the "15 sitters" advertisement eloquently demonstrates. This problem is of relatively recent origin, so it is no wonder that a complete solution has not yet been found. After all, it was not so very long ago when most businesses—even railroads—were so small that everybody around them knew almost as much about them as the owners did. Now some businesses are so big that it is hard even for a resolute genius to comprehend how all the parts fit together.

If collaboration-by-persuasion cannot be made to work, then socialism, communism or fascism are left as the only alternatives. These European substitutes for freedom of labor to work, of capital to invest, and of customers to buy where and how they please, are

simply slightly different brands of the same evil thing, viz., the police state—which is a practical device designed to force people to cooperate in production when they have come to hate each other so deeply that they don't talk the same language, and won't pull together unless they are physically compelled to do so.

## Work Equipment Is Now "Big Business"

There are those who believe that the mechanization of maintenance-of-way work is a development the importance of which has not been correctly evaluated by many high officers of the railroads. As a consequence, it is held, the maximum potential value of mechanization is not being realized because, in the absence of a full realization of its importance, many things are being left undone that would help to enhance the benefits derived from it. It would be difficult to say with certainty whether these observations are correct, but we do know that any railroad has nothing to lose and possibly much to gain by taking a long, close look at its present policy regarding the purchase and use of power machines for maintenance-of-way work.

The first step in such a study might well be a recapitulation of the advantages of mechanization, particularly in the light of present conditions. The primary advantage of using machines in maintenance-of-way work is that they save man-hours per unit of work done, although there are, in addition, many subsidiary benefits. A natural corollary is that it becomes increasingly important to save man-hours as the cost per man-hour goes up. With the cost of labor now more than 100 per cent greater than it was 10 years ago, when large purchases of machines were being made, it follows naturally that mechanization is roughly twice as important as it was then. In fact, starting from small beginnings hardly more than two decades ago, mechanization has now become *big business*.

With this established, there will be no difficulty in making the point that the advantages of mechanization will be partly wasted unless every step is taken that is necessary if its maximum potentialities are to be realized. Looking at the situation from this point of view, there are two "musts" to be considered. First, the full benefits of mechanization cannot be realized unless a complete complement of modern work equipment is available. Second, all machines must be used, operated and maintained in such a manner that each, whether a portable tie-tamping outfit or a giant spreader, will be made to produce the maximum return on the investment.

In considering the second of these "musts" it is important to realize that the mechanization of maintenance-of-way work requires a highly-specialized adaptation of the power machine. Rather than being used, as in the mechanical department, in stationary shops where conditions are fairly uniform and where the problems of scheduling, operating and maintaining the machines are relatively simple, maintenance-of-way



machines may be scattered at hundreds of places over the railroad, where they are subject to possible frequent changes in location, in operators, in supervision and in other working conditions.

Being thus subject to special conditions, it follows that maintenance-of-way work equipment must have special attention if the best results are to be realized. This means a special organization, integrated into the maintenance department as a whole, for supervising the assignment, operation and maintenance of such equipment. It means specially trained operators for handling them in the field, specially trained mechanics for repairing and maintaining them in the field and in the shop, and, above all, supervision that is specially tuned to the particular needs of a mechanized organization.

Properly administered, mechanization in the maintenance department can be an even more powerful ally than it is now in helping to combat higher costs. However, like the savings to be expected, the problem of adequate administration is large, and is not one that can be disposed of in one day before lunch, along with the morning mail.

## Facilities and Manpower

Based upon the known expenditures for the construction of new plant and purchase of new equipment by American business, including transportation, but excluding agriculture, during the early part of the year and the planned expenditures for the last two quarters, it is estimated that more than \$15 billion will be spent for this purpose in 1947. This estimate was made in conjunction with the quarterly joint survey by the Securities and Exchange Commission and the Department of Commerce. It is 25 per cent more than was expended for this purpose in 1946, 85 per cent higher than in 1941, and 65 per cent greater than in 1929. These expenditures have been made for the production of new products, improving the quality of old ones and to reduce the costs through greater mechanization. The railways and the railway supply manufacturing companies are keeping pace with industry in general in this respect.

The introduction of improved and mechanized facilities has focused attention on another vital factor—that of the human element. While mechanized production reduces the amount of manpower required, one railway supply manufacturer who has been unusually active in improving plant and facilities, finds that it is becoming more and more necessary and important to raise the standard of the workers. To this end this company has given special attention to providing the best possible working conditions; it is exercising unusual care in the selection of the workers and in allocating them to that type of work for which they are best suited. It is also making sure that the men are thoroughly trained and instructed and that they are kept currently informed as to the purposes, the progress and problems of the company—in other words, they are made to feel that they are members of a large family, with a common purpose.

Why spend large sums of money for physical improvements, asks this manufacturer, unless the workers are so selected, trained and informed that full advantage can be taken of these improvements through increased production and improved quality of output?

## Hope Deferred . . .

With a record of deliveries of new freight cars from the shops of the car builders and railroads during two months since freight-car progress(?) was last reviewed in these columns, there is further need to revise downward the estimate as to the number of cars likely to be available during the fall traffic peak which is now under way. At the time of the previous comment it appeared unlikely that the quota of 10,000 cars a month would be attained in August and it seemed probable at that time that the August to October production might fall short at least 3,000 cars from the 30,000 cars for the three months for which the steel had been promised. The production figures for two of those months are now available and amount to 13,560 cars.

It now seems doubtful whether the quota of 10,000 cars per month will be attained in any month during the current year. September is the first month this year in which the output of new cars for domestic use has exceeded the number of cars retired.

As the railroads approach the fall traffic peak the net effect of the lack of progress in building up deliveries is such that for the first eight months of the year, according to Car Service Division reports, more than 9,400 fewer cars have been installed than were retired, a total which has been reduced by 1,400 as the result of the excess of deliveries over retirements during September. The railroads, therefore, enter the fall traffic peak with more than 8,000 fewer cars than they owned at the beginning of the year, and, what is worse, about 16,000 fewer than were available at the beginning of the fall peak in 1946.

In the meantime, carloadings for the first three quarters of 1947 have exceeded those of 1946 by 10 per cent and for the first two weeks of the fourth quarter are 5 per cent greater than they were during the same period a year ago. Weekly shortages of box cars have been above 11,000 since July 26 and were over 16,000 for the week ended September 13, while weekly surpluses are running below 200. That these figures are an improvement over the more than 20,000 box cars short during March and early April, at which time surpluses were running around 50 cars, is not the result of the amelioration of the car supply but an indication of an increase in the intensity of utilization.

Likewise, open-top car shortages have exceeded 10,000 in each weekly report since July 26 and, on September 13, were nearly 15,000. Surpluses had been completely absent for several weeks. Total freight-car shortages were running over 30,000 and surpluses were below 1,500 on September 13. There are few instances in which shortages have been completely absent when minimum surpluses have been less than 60,000 cars.

# Load Compensating Brake Goes In Service

Installation of limited number authorized by A.A.R.—  
Single-cylinder equipment provides 50 to 60 per cent  
empty braking ratio and about 30 per cent loaded ratio

**T**HE Illinois Central is about to place in service 400 hopper cars equipped with the new Load Compensating Brake. The December 30, 1944,\* issue of the *Railway Age* carried an article that dealt principally with the purpose of this brake in comparison with the single capacity brake and covered only briefly the equipment involved and the manner in which it functioned. The design, at that time in its early stage, contemplated two brake cylinders similar to those used with the empty-and-load brake equipment, but the pressure controlling means differed from that of the empty-and-load equipment in that braking forces were adjustable to intermediate loads as well as to the empty and fully loaded cars.

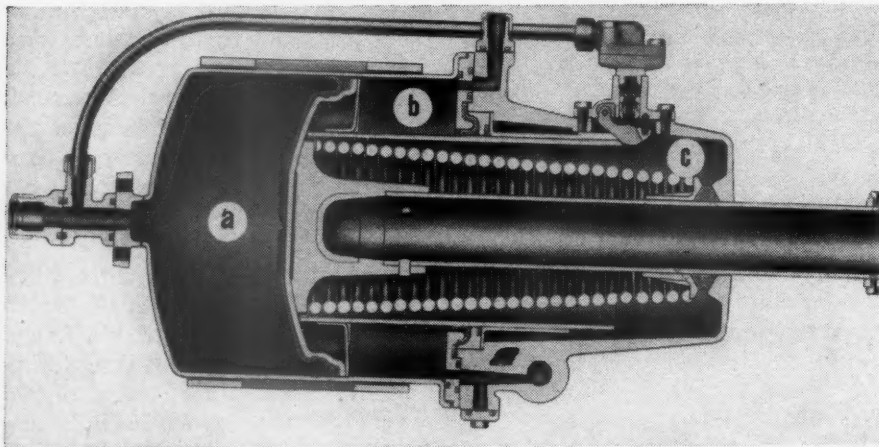


Fig. 1—The brake-cylinder body showing the 12-in. piston chamber *a*; the chamber *b* around the hollow rod; and the chamber *c* inside the hollow rod

After many months of design and study, followed by experimental installations on non-interchange cars, a very much simpler equipment has been produced. It is this equipment that is being installed on the new Illinois Central cars. These 400 cars will find their way over many roads in the near future.

By a unique piston arrangement it is possible for the first time to produce varying braking forces with a single

**By C. D. STEWART**  
Vice-President, Westinghouse Air Brake Company

brake cylinder. In this way the extra weight and handicap of a second brake cylinder with its notched push rod and latch box is avoided. This arrangement, also for the first time, employs less air for braking a loaded car than for an empty car—a very desirable situation.

To obtain the necessary braking force for the loaded car the single cylinder is 12 in. in diameter, and to conserve air the nominal piston travel is 5 in. This compares with 8-in. nominal piston travel for the single-capacity brake and

with 8-in. piston travel for the empty cylinder and 3-in. for the load cylinder of the empty-and-load brake. To better insure the desired piston travel at all times an automatic slack adjuster is employed. This also is the first time that the slack adjuster has been considered to be an indispensable part of a freight brake equipment.

The sectional view of the brake cylinder, Fig. 1, reveals the points of interest in its design. The cylinder body is of conventional design. The

piston, however, has, in addition to the conventional 3-in. diameter hollow rod, a second hollow rod ( $7\frac{5}{8}$  in. in diameter). This larger hollow rod in conjunction with a sealing gland in the non-pressure head forms an air chamber on the spring side of the 12-in. piston. The chamber *c* inside of the hollow rod is always subjected to atmospheric pressure. The chamber *b* around the hollow rod is subjected to pressures ranging from atmospheric to the maximum developed in the chamber *a* of the 12-in. piston.

The air under pressure in *a* is that which produces the braking force, and the degree of braking is produced by the amount of service brake reduction or by an emergency application, in the conventional manner.

The air under pressure in *b* counteracts the pressure in *a* in proportion to the respective pressures and piston areas in the two chambers. If the car is fully loaded the pressure in *b* will be atmospheric at all times. If the car is empty the pressure will be the same as in *a*. When the car contains intermediate loads the pressure will differ from that in *a* in proportion to the loading.

The "effective" piston area for the empty car condition is capable of producing a 50 to 60 per cent braking ratio with 50 lb. brake-cylinder pressure. The "effective" piston area for the loaded car condition is capable of producing approximately 30 per cent braking ratio with the same pressure.

## Braking Ratios

Thus the range of braking ratios is much narrower than with the single-capacity brake and consequently the slack producing forces in mixed trains is very much reduced. As for solid loaded trains, the braking ratio is 50 to 100 per cent greater than is now obtained on trains having the single-capacity brake and, therefore, the brake is very much more effective for the control of trains on heavy grades or for trains operating at higher speeds.

Since the brake cylinder will have air under pressure both in chambers *a*

\* See page 985.

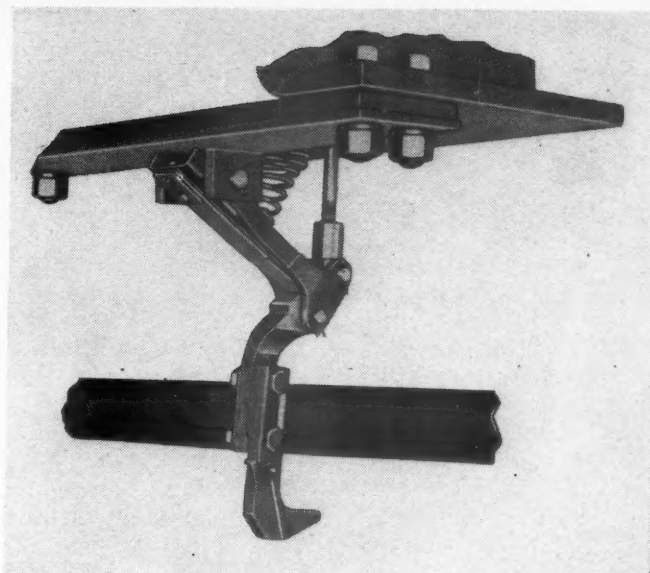


and *b* under certain conditions of car loading, it follows that air for operating the automatic slack adjuster cannot be taken from it in the conventional way. To meet this situation a cam-operated valve is mounted in the non-pressure head in such a location that the large hollow tube engages it at the point of nominal piston travel. The valve is opened by any movement of the hollow rod beyond this point and air under pressure from chamber *a* causes the slack adjuster to function in the conventional way and thereby takes up the slack in the brake rigging, restoring the piston travel to normal.

### Air-Pressure Control

The degree of air pressure that is admitted to chamber *b* is determined by the load-compensating valve and it, in turn, is automatically adjusted by the weighing gear. The gear is normally in free position so that car body movement due to running over the road will not cause false registration and also will not wear out the equipment. Fig. 2 shows it in such position. When the car is at its destination and having been loaded or unloaded, the locomotive is again attached, the brake system is of course charged before the car is moved. In the processes of building up the air pressure from atmosphere to 45 lb., the weighing gear momentarily comes into action. The hook is raised, engages a bar on the car truck, Fig. 3, and thereby causes the mechanism in the compensating valve to assume a position that corresponds to the deflection of the car springs that in turn reflects the degree of car loading. When this function has

Fig. 2 — Weighing gear in its non-functioning position



been performed and the brake-system pressure rises above 45 lb., the weighing gear is disengaged and the compensating valve is locked in the position to which it has just been moved.

Fig. 4 illustrates the scale-beam mechanism within the compensating valve. The movable fulcrum *d* is positioned by the weighing gear in conformity with the car loading. The plunger *e* creates a force on the right hand end of the scale beam *f*, when air under pressure is present in chamber *a*, which is connected at all times with chamber *a* of the brake cylinder. The amount of force that is exerted at *f* is in direct proportion to the brake application, and the amount of force that is delivered at *g* is in proportion to the location of the

fulcrum *d*. In the position shown the fulcrum is in the middle of the beam and consequently the forces at each end of the beam are equal. The upward movement of the left end of the beam opens an air-supply valve that permits the flow of air from the compensating reservoir to chamber *b* of the brake cylinder, and because the forces on both ends of the fulcrum are equal the pressures in both chambers of the brake cylinder will be equal. The effective braking force exerted on the brake-cylinder push rod is that developed on the brake-cylinder piston area in chamber *a* which is not opposed by a like pressure in chamber *b*. When the car is fully loaded the fulcrum is directly under plunger *e* and then there is no

Fig. 3 (below)—The hook engaging the bar on the car truck

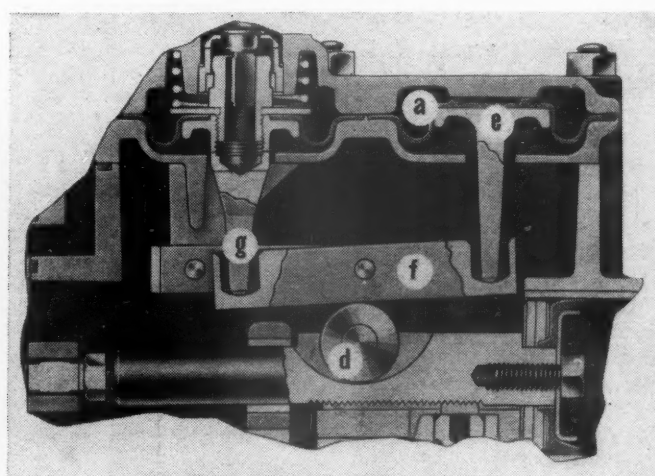
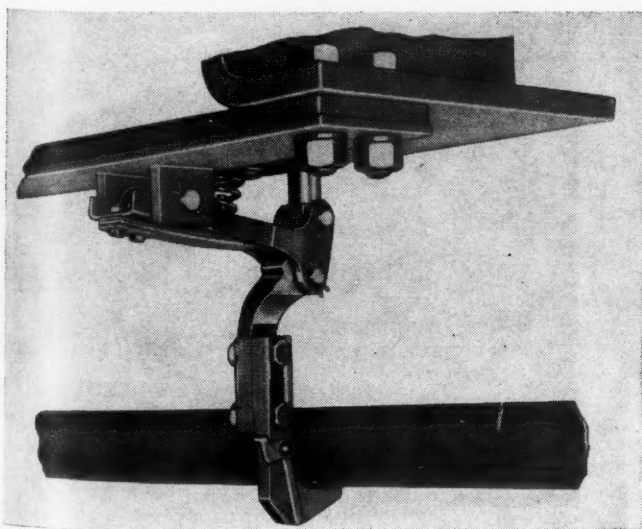


Fig. 4 (above)—The scale beam mechanism within the compensating valve

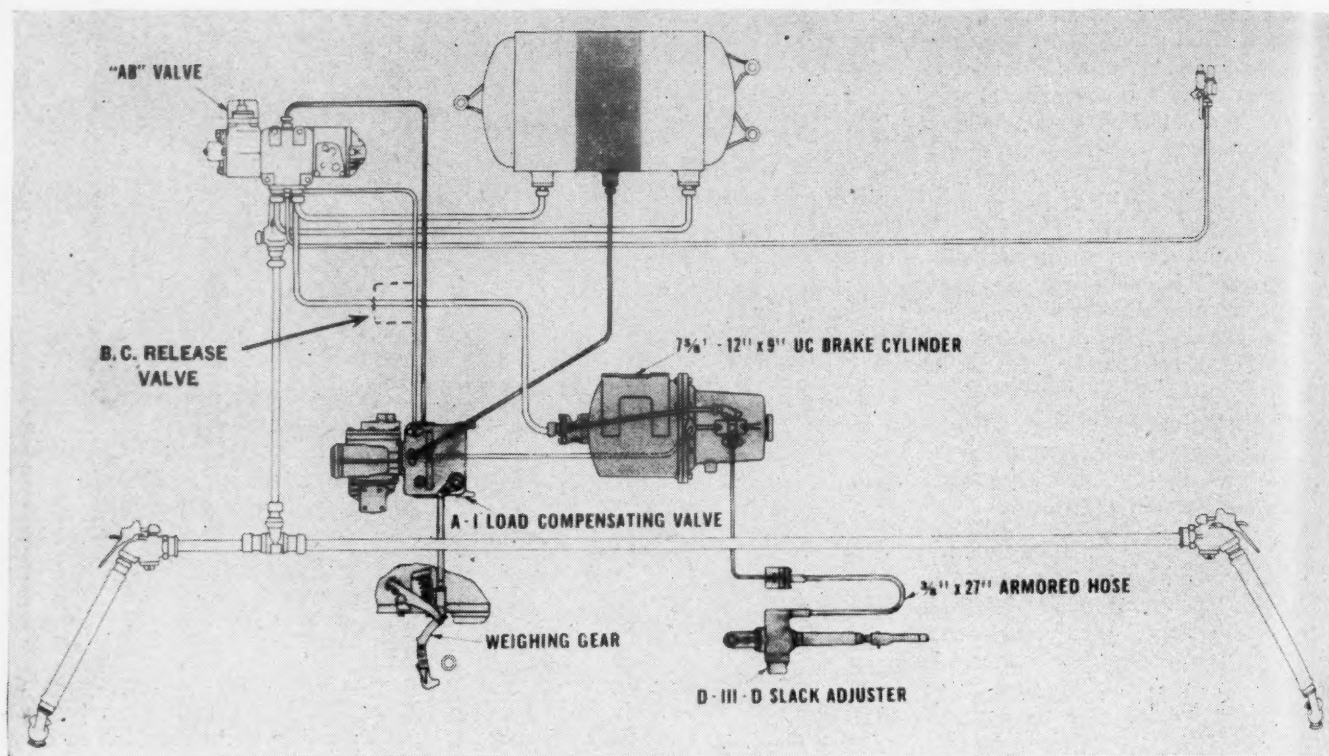


Fig. 5—Piping diagram of the complete Load Compensating Brake equipment

force delivered to the left end of the scale beam. As a consequence there will be no air under pressure transmitted to chamber *b* of the brake cylinder.

Fig. 5 is a piping diagram of the complete Load Compensating Brake equipment. It shows the relation of the various parts to each other and to the standard AB brake equipment. The shaded parts are those added to the AB equipment to provide the load compensating brake.

The valve dotted in, in the brake-cylinder line, is a brake cylinder release valve. Its function is to vent the brake-cylinder pressure when cars are to be shunted, and to do this without loss of the reservoir pressures. This valve is manually opened by a trainman after the brake-pipe pressure has been vented. It will then remain open until brake-pipe pressure has been restored, when it automatically returns to normal position.

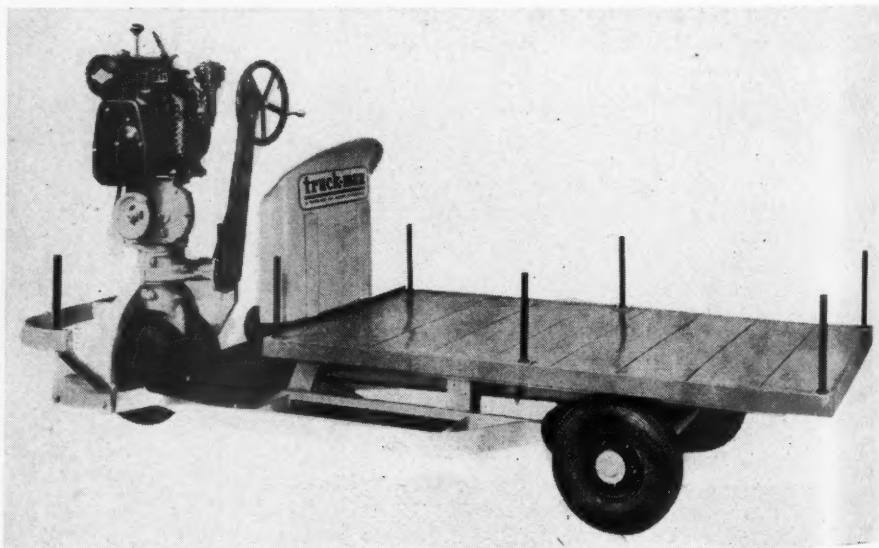
The A.A.R. has authorized the in-

stallation of a limited number of the load compensating equipment and also of the release valve. When a sufficient number of cars have been equipped with the former it plans to conduct road tests of 150-car trains under the empty and loaded conditions. Observations will be made both as to general brake performance and as to stopping distances from various speeds in comparison with the same performance with the present single-capacity brake.

## New Utility Truck

Truck-Man Inc., 1431 W. Ganson st., Jackson, Mich., has announced a new platform utility truck, designed to solve odd-job problems in material handling. Deck space—the platform is 5 ft. by 5½ ft.—is said to be ample for handling awkward, manually loaded materials such as bagged cement, luggage, and even permanent equipment up to a conservative 1,500-lb. capacity.

This truck is powered by a Briggs & Stratton 2¼-hp. gasoline engine and has full high and low speed in forward or reverse. Specifications are: length overall, 108 in.; wheelbase, 72 in.; ground clearance, 5½ in.; loading height, 16 in.; tires, four 6-ply pneumatic industrial type, size 14 in. by 4½ in. The manufacturer states that the utility will turn in its own length.



Truck-Man's new utility truck



# How the B. & O.'s Freight Traffic Men Get Acquainted with the Road

Representatives get informative "guided tours" over the plant which produces the transportation they sell

TO EQUIP its freight traffic organization to do a superior job of selling transportation service, the Baltimore & Ohio has embarked upon an extensive training program which is of particular interest because it involves an "on track" familiarization program for a portion of the railroad staff which—particularly when assigned to off-line offices—gets little opportunity to see or ride the line, even though the freight salesmen need this knowledge as much as does any other type of personnel.

Each representative in the training program participates in two two-week courses, each course covering a different territory. The courses are not scheduled consecutively, so that no one is away from his regular duties for more than two weeks at a time. About a dozen freight representatives make up each unit of the course, and eventually all 300 B. & O. representatives will participate—about 40 trips being planned.

The participants on each trip include representatives from different on and off-line offices, avoiding undue depletion of the force at any one office, and giving the men from the different offices a chance to get acquainted. While the inspection is being conducted at the various points en route, the representatives are given an opportunity to meet local operating officers and to meet or reacquaint themselves with local members of their own department. That this is of considerable value is evidenced by the statement of one representative, who said that he "had often heard of the 'B. & O. family' but had just learned what that really meant."

The first series of training trips, which started July 1, 1946, and was concluded July 19, 1947, took the groups over the line from Chicago to New York, with stops at the principal intermediate cities, and with a side trip to Toledo, Ohio. A full day was devoted to the important Baltimore & Ohio Chicago Terminal. At New York the men were given a chance to inspect lighterage facilities and the Staten Island freight lay-out.

All of the inspections are accomplished during daylight, two special business cars, which are the representatives' "home on wheels" while on the tours.



Freight representatives of the Baltimore & Ohio begin the second phase of their "on track" training program which will take them over system facilities lying generally between St. Louis, Mo., and Buffalo, N. Y.

being attached to regular passenger trains for night-time movement between inspection points. Each evening, after dinner, there are held in the cars lecture-discussion periods conducted by the heads of the several departments of the railroad, dealing particularly with their relation to the traffic department.

## "Seeing Chicago"

A description of a typical day of a group at Chicago may serve to illustrate the character of the tours. Upon arrival the group is introduced to various local officers at Grand Central station while the two business cars are switched into a special inspection train. Chairs in the rear car are arranged in class-room fashion facing the observation end, affording everyone a clear view of the railroad. As the special progresses over its 109-mi. tour of the B. & O. C. T.'s facilities, a local officer takes over the rolling classroom, pointing out principal industries, interchange points, freight-houses and team tracks. A one-hour

stop is made at the new Barr yard where most B. & O. Chicago classification is to be concentrated. At the end of the day's tour, while waiting for movement to the next point of inspection, an evening classroom discussion is held.

The second phase of the tours is now in progress and covers the B. & O. lines from St. Louis, Mo., to Buffalo, N. Y., and Rochester, with stops at such intermediate points as Indianapolis, Ind., Cincinnati, Ohio, Dayton, Cleveland, Pittsburgh, Pa., and Louisville, Ky. At Louisville a special trip is arranged over the Kentucky & Indiana Terminal. At St. Louis a day is devoted to touring the Terminal Railroad Association and the Alton & Southern. A coal mine is inspected during a stop at Wheeling, W. Va.

Each representative is furnished with two comprehensive training manuals which he carries with him on the trip. The first manual covers freight facilities and operations at the various points included in the tour, and is prepared in

(Continued on page 48)



## *An Ultra-Modern Research Center*

**Johns-Manville Corporation unveils first laboratory and pilot plant building and lays the cornerstone of second structure as part of project that will ultimately include several other buildings**

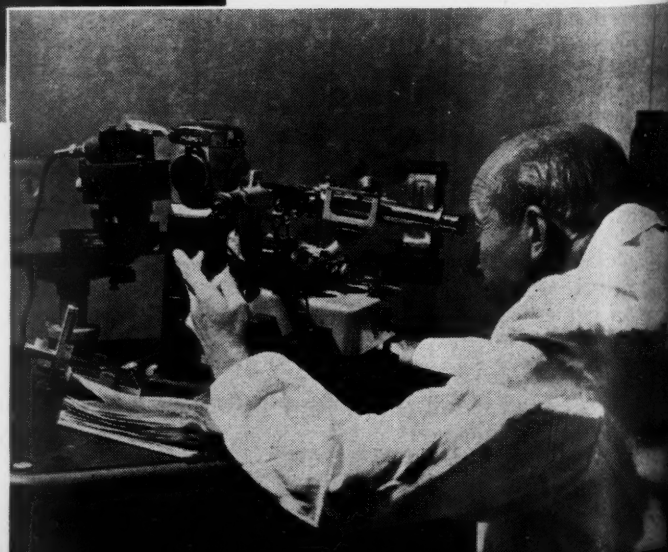


**Above—A typical laboratory, so constructed as to provide maximum flexibility in expanding or contracting the area as requirements dictate**

**T**HE value of intense industrial research is indicated by the fact that 56 per cent of current Johns-Manville sales are due to new and improved products added since 1928. It is little wonder, therefore, that this company decided to concentrate all of its extensive research facilities in a center, near Manville, N. J., fitted with the most modern and up-to-date equipment and facilities. The first laboratory and pilot plant building, shown above, two stories in height and 572 ft. long, is now in operation. It includes substantially 10 miniature factories or pilot plants, each adjacent—across the corridor—from its own special laboratory.

It is the responsibility of the research

**Right—X-ray diffraction unit, analyzing sample of asbestos, makes it possible quickly to determine the chemical composition**



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department to find what new or improved products are needed, to develop such products by the most painstaking scientific research and laboratory methods, and then to devise pilot plants for producing them on a commercial basis. When these plants have been thoroughly tried out and perfected, they are transferred to one of the many manufacturing plants across the Raritan river at Manville, or elsewhere in this country, Canada or Mexico.

The two-story building has its laboratories on one side of corridors extending the length of the building, with space for pilot plants on the other side. The building itself, and the laboratory facilities, are of the most up-to-date design, including a large amount of Johns-Manville construction and finishing materials.

The present research organization is composed of 420 people and is divided into 21 sections. The Johns-Manville Corporation manufactures a wide variety of products and, in general, each class of these will eventually have its own research laboratory and pilot plant. The new building supplies facilities for about one-half of its diversified business, with its more than 1,200 products, including materials for building and for industrial and other purposes. It is so devised that it can readily be adapted to changing conditions, so that a greater or smaller amount of space may be given to any one division, depending upon its requirements.

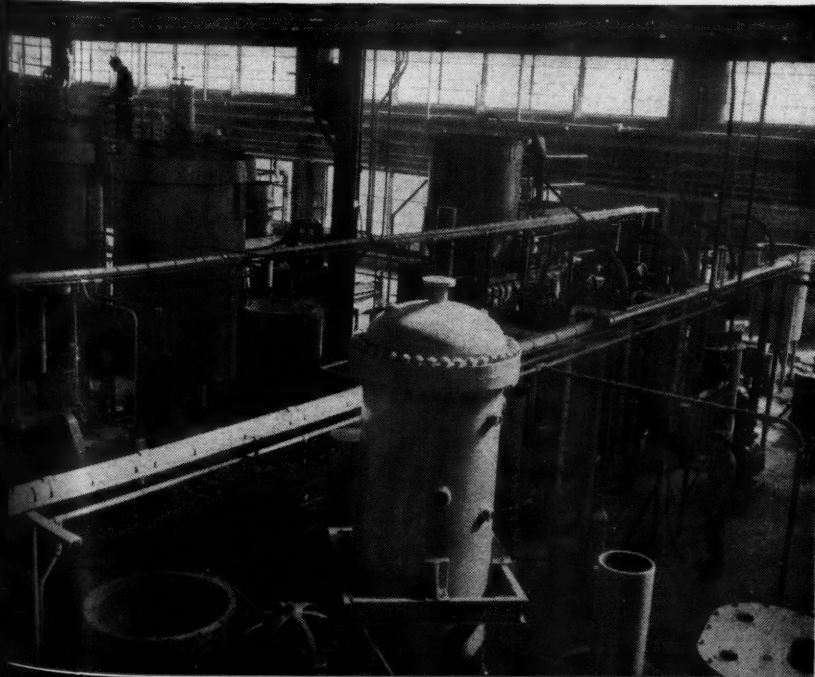
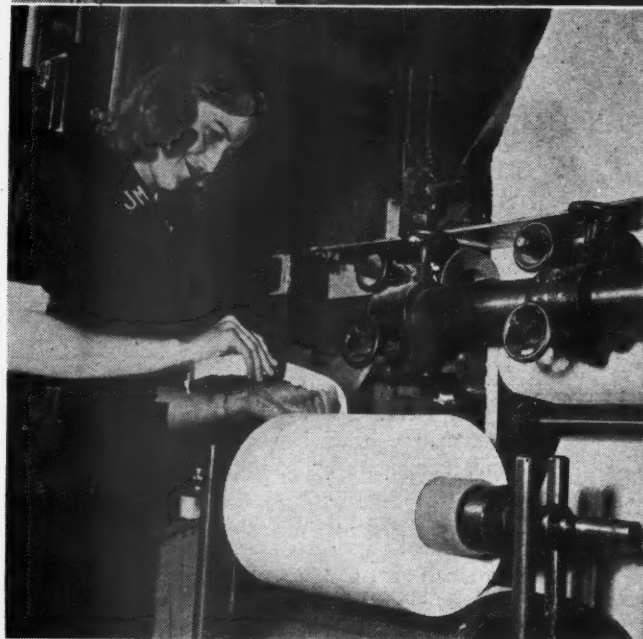
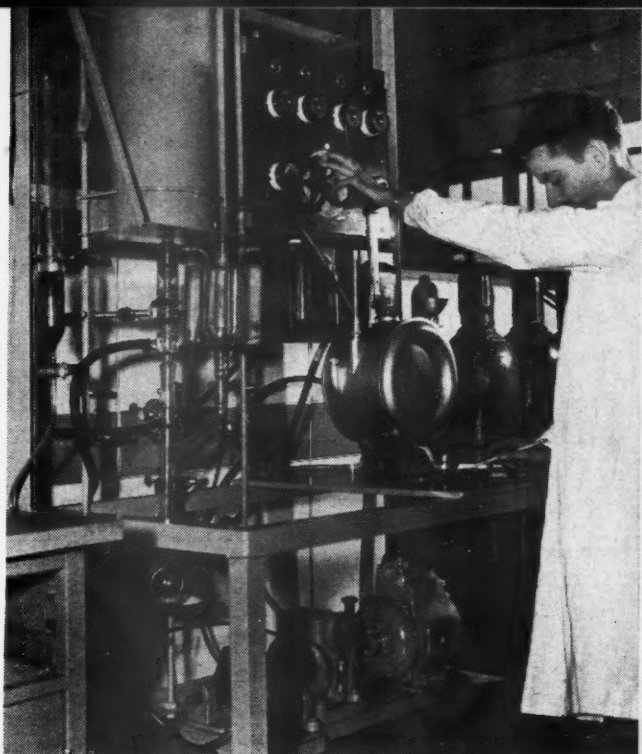
The second building, now under construction, will be completed about the middle of next year and will house the administrative offices, auditorium, library and a variety of other facilities not requiring pilot plant equipment.

Pilot plant, adjacent to research laboratory, for manufacture of industrial insulations

Recording data from catalyst evaluating apparatus. Celite products are employed as bases for catalysts used in a wide variety of processes

Pilot plant for experimental production of new Quinterra asbestos paper, valuable for insulating purposes because of great dielectric strength and resistance to high temperatures

"Switchboard" control room of thermal conductivity laboratory — gives tests readings on high temperature insulations in adjacent laboratories (below right)



# *Electrical Sections Hold Annual Meetings*

**The fourteen reports presented afford an effective coverage of an ever widening scope of railroad applications**

**T**HE two Electrical sections of the Association of American Railroads held their annual meetings in Chicago, the Engineering Division Section meeting being held at the Congress Hotel on Tuesday, September 30, and the

Mechanical Division Section at the Hotel Sherman on October 1-2. A business meeting of the Railway Electric Supply Manufacturers Association was held at the Hotel Sherman on Wednesday, October 1.

the flow of current, appears to be the only effective means of protection and experiments are now being made to find a practical method of applying asphalt to concrete, when it is placed or poured.

## *Engineering Division Meeting*

Seven reports were received by the Electrical Section, Engineering Division. The meeting was opened by Chairman K. H. Gordon, assistant electrical engineer, Pennsylvania Railroad, who introduced Armstrong Chinn, chairman of the Engineering Division, A. A. R. Mr. Chinn commented upon the scope of the work being done by the section, and enlarged this thought to show how primitive railroad operation would be without electrical power and equipment.

Chairman Gordon supplemented Mr. Chinn's comments by pointing out that while the preparation of manual material is perhaps the section's most important function, it constitutes a relatively small part of the work done. The reports are not spectacular, or glamorous, but do contain a great wealth of information.

### **Power Supply**

The power supply report describes a trainmen's lantern battery tester, which will, in one minute, determine the amount of life remaining in a battery. The Illinois Central has used it with practical results, and will extend its application to all locations where such batteries are used.

The section of the report on portable tools states that there is a decided trend toward the use of smaller power plants for supplying the necessary power. Capacities of 1,500 watts and 2,000 watts are taking the place of the former 3,000-watt plants.

On the subject of electrical facilities in coach yards, the report expresses a preference for the use of poles between tracks for the mounting of lighting fixtures. This requires adequate track

spacing, but also permits the support of conduit and pipe, which are highly subject to corrosion in the ground. This is particularly true where cars are washed.

Discussion of the report indicated that the growing demand for passenger car standby power is creating an extremely difficult problem.

### **Overhead Line Construction**

Measuring the height of wires at wire crossings is the principal subject of the report on overhead transmission line and catenary construction. An investigation by the committee shows that for a closely approximate method, the majority of railroads use a small pocket device, consisting of a sighting tube on which a small spirit level is mounted at a 45 deg. angle. In some cases, a cord or tape is thrown over the wires; sometimes the measurement is accomplished by climbing an adjacent pole; if the crossing is low, a measuring rod may be used. If extreme accuracy is desired, a transit is employed.

### **Electrolysis**

For several years, the committee on electrolysis has been investigating the corrosion of steel in concrete buried in the earth. One-inch round steel specimens were placed in concrete cylinders of various sizes, some of which were encased in steel pipe or coated with asphalt. A potential of 25 volts d. c. was applied to the steel rod and after varying periods of time, the effect of this treatment were noted. Coating with asphalt, which acts as an insulation to

### **Electronics**

Dr. Gordon Volkenant, associate research director, Minneapolis-Honeywell Regulator Company, in discussing electronics, employed a number of quite spectacular demonstrations applying to its rapidly expanding use. He told how it is being used to control guided missiles and explained the proximity fuse which did so much toward hastening the end of the war. Specifically, he told how it is being used to effect improvements in air conditioning control.

### **Application of Motors**

The report on application of motors is the work of a joint committee. It was presented at the meetings of both the Electrical Section, Engineering Division, and the Electrical Section, Mechanical Division, A. A. R. It is summarized in this issue with the reports of the latter group.

### **Protective Devices and Safety Rules**

The report on protective devices and safety rules is concerned primarily with the prevention of sparks which may cause fire during the transfer of inflammable liquids or gas, or in tanks or tank cars containing such liquids or gas. It deals specifically with revisions of previous reports.

### **Illumination**

The committee on illumination presents what is an innovation in engine-house working conditions in the form of a description of the lighting of the Pennsylvania's steam engine house at East Altoona, Pa. The light level by this method for substantially the entire side of the locomotive and the side of the boiler is about 25 foot-candles, shading off to 10 at the rear of the tender. These values were determined after the



installation had been in service for approximately 6 weeks. The connected electrical load at each stall is 6.27 kw. The report states that the cost of the light becomes relatively insignificant, when compared with what it saves by improving working conditions.

## Corrosion Resisting Materials

This year's report on corrosion resisting materials concludes the data derived from tests which have been made over a period of years on corrosion resisting materials. One set of tests was made in the smoke jack of an enginehouse at Cedar Hill, Conn., another in Hemphill tunnel near Welch, W. Va., and a third in a yard at Lambert Point,

Va., where the materials tested were subject to salt air. In all cases, samples of various metals and alloys were suspended overhead and were removed, examined, cleaned and weighed at intervals. The materials included various types of aluminum alloys, brass, leaded brass, muntz metal, a wide variety of bronzes, copper, copper nickel alloy, chrome nickel alloy, malleable iron, ingot iron, wrought iron, carbon steel (black), carbon steel (galvanized), copper bearing iron and steel, chrome steel, chrome nickel steel and chromenickel steel. Generally, it can be said that the bronzes offered the highest resistance to corrosion and that good results were also obtained with chromenickel-molybdenum steel, silicon iron, and chrome-nickel steel.

also used in the case of road passenger locomotives and when mileage is the criterion, it varies from 30,000 to 80,000. The color of the oil seems to be considered of more importance for passenger power than for the others.

Crank case drainings are re-refined by 14 of the 42 railroads. On 16 they are reclaimed and on 12 they are used as drained. On 26 roads crank case drainings are given laboratory tests, 6 employ random tests and 9 make no tests. Eight of the roads consider the reclaimed or re-refined oil as good as new oil, nine use it for switchers and motor cars, ten use it as make-up oil, and the remainder for steam locomotives, as car and track oil, etc.

It is the consensus that additives are removed when oil is processed, but in most cases the reclaimed oil is not fortified with additives when it is reused.

Reasons given for changing lubricating oil filters vary widely. It may be governed by a blotter test, by mileage, or time, or in the case of some by color or dirt content.

The results of the questionnaire on engine cooling water indicate very clearly that treatment is considered highly important.

Other subjects being studied by the committee are nickel-cadmium storage batteries, load indicators to show the overload capacity of Diesel-electric locomotives under all conditions, the question of adhesion at high speed, and wheel slip protection. Concerning the latter subject, the report states that on high speed, alternating-current electric locomotives, with the armatures of two

## Mechanical Division Meeting

The meeting of the Electrical Section, Mechanical Division, A. A. R., was called to order by Chairman G. E. Hauss, electrical supervisor, Baltimore & Ohio. Five new members were introduced, and Mr. Hauss called attention to the fact that J. A. Andreucetti had retired as chief electrical engineer of the Chicago & North Western, but has been retained as secretary of the Electrical Section.

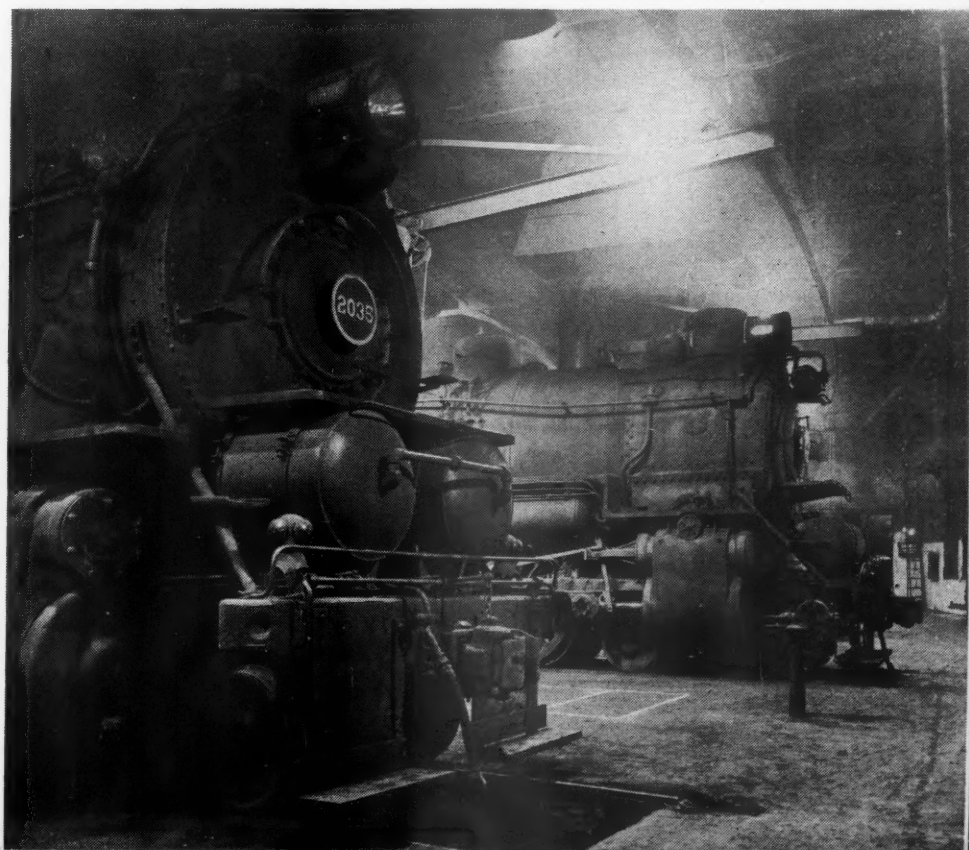
Chairman Hauss announced the election of the following slate of officers: chairman: J. E. Gardner, electrical engineer, Chicago, Burlington & Quincy; vice-chairman (east): L. S. Billau, electrical engineer, Baltimore & Ohio; vice-chairman (west): F. O. Marshall, chief engineer, Pullman Company; committee of direction: H. C. Paige, assistant mechanical engineer, New York, New Haven & Hartford, and L. E. Grant, engineer of tests, Chicago, Milwaukee, St. Paul & Pacific.

mineral oil, 13 use additives, 2 both, and one uses a detergent.

Practices governing oil changes vary widely. In the case of switchers, the governing factors may be oil analysis, 6 months' service, 3 to 6 months' service, 2,000 to 3,000 hours' service, 12 months' service, viscosity and analysis, etc.

Oil changes on road freight power are based on mileages varying from 20,000 to 100,000, on times from 6 to 12 months, and on viscosity or analysis or both. Oil analysis and viscosity are

Interior of a Pennsylvania enginehouse using the type of lighting described in the report on illumination



## Automotive and Electric Rolling Stock

A major part of the report on automotive and electric rolling stock consists of data obtained from 42 railroads concerning their lubrication and engine cooling water practices. Tables compiled from this data show that 14 of the railroads use additives for switcher lubricating oil, 19 use straight mineral oil and 6 use both. In the case of 27 roads operating road freight locomotives, it is 15 additives, 11 straight mineral, and one both. Out of 27 roads using road passenger Diesels, 10 use

driving axles permanently connected in series, a wheel slip relay is satisfactory. This relay is actuated by the difference in voltage, caused by a speed differential between driving axles on which the motors are connected in series; namely, 1 and 2, 3 and 4, and 5 and 6.

It has been indicated that for a Diesel-electric locomotive the ordinary voltage-actuated, wheel-slip relay is adequate for protection of motors connected in series at low speed, but is not satisfactory with motors connected in parallel at high speed. To provide protection for the latter condition it can be said that a wheel-slide detection device, similar to that used on main line cars in connection with braking, has proved satisfactory as an anti-slip device on the two driving axles of a multiple-unit car with traction motors connected in series. This device works on the speed differential between two sets of brushes, each set attached to an axle and rotating inside of a stationary commutator.

Response to the questionnaire, sent out by the committee, indicates the advisability of more standardization, and it is the hope of the committee that in its next report it can make definite recommendations. Discussion on the subject of nickel-cadmium batteries showed they would fit in the same space as lead batteries. One railroad which has used them feels that if the nickel-cadmium batteries will serve for 10 or 12 years, they will be competitive with lead batteries.

The question of determining proper battery charging by loss of electrolyte level was discussed. It appears that this is a good practice, and that a loss of  $\frac{1}{2}$  in. per month indicates proper charging—with less indicating undercharging, and more overcharging.

In discussing the question of adhesion at high speeds, it was said that adhesion does not change, but that slipping is more apt to be due to bouncing wheels, spring action, etc. Apparently, also, smaller wheels are more apt to be "slippery" at high speeds than are larger ones. It was inferred that differential relays may not be satisfactory for preventing wheel slippage, but that the present cost of more sensitive devices is high. It was also stated that it is the first, or the first two, axles which give trouble at high speed.

## Electric Welding

A major part of the report on electric welding consists of descriptions of inert gas shielding for arc welding, atomic-hydrogen welding and automatic welding heads. The inert gas process is described as one which employs a bare tungsten electrode, which is not deposited in the weld. The weld is shielded against oxidation by an inert

gas, usually argon or helium, which flows through a nozzle in the electrode holder and completely envelops the electrode and molten pool. Welds can be made by fusing the base metals only, or by additional metal from a filler rod. The process is suitable for magnesium alloys, copper, stainless steel, monel metal and many others.

The atomic-hydrogen process, the report states, differs from other arc welding processes in that the arc is formed between two tungsten electrodes, rather than one electrode and the work. This makes the atomic-hydrogen electrode holder an unusually mobile tool, since it can be moved from place to place without the arc being extinguished. The arc is surrounded by hydrogen which acts both as a shield and as a source of additional heat. By the atomic hydrogen welding process, welds of approximately the same analysis as the parent metal can be made.

Automatic welding heads are divided into three classes: namely, those for feeding bare or lightly coated electrodes, those for feeding heavily coated electrodes, and the automatic carbon arc welding heads.

The final section of the report deals with qualification tests for welding operators. It is the opinion of the committee that the qualification test previously appearing in the manual is satisfactory for preliminary testing, but it believes a new method incorporated in this report should be adopted as the final one for the railroads' permanent record of the individual welder.

During the discussion, one of the members asked if progress has been made in welding cast iron electrically. The committee chairman replied that two high-nickel-content coated electrodes are now being used, which do a reasonably good job. He added, however, that he did not think that they would be satisfactory for the repair of a broken locomotive cylinder.

## Motors and Control

The respective merits of synchronous motor-generator sets and rectifiers as sources of shop power are discussed in the report on motors and control. This application requires equipment of about 300 kw. capacity. An operating condition is assumed in the report, and a comparison made under this condition indicates that sealed-type rectifiers are more economical in operating and maintenance costs than motor-generator sets. Greater loads than those assumed, the report states, will show a greater saving by the use of rectifiers, due to their higher efficiency at all loads. It is pointed out, however, that the costs of motor-generator sets may be reduced below those selected for the comparison.

The second section of the report com-

pares portable rectifiers with motor-generator sets for battery charging. No conclusions are drawn, but the report shows that both will operate satisfactorily, that the rectifier costs about 50 per cent more than the motor-generator set, that the rectifier is lighter and more easily portable, that rectifier operating and maintenance costs are low, and that the rectifier has a better power factor characteristic than the motor-generator.

Under the subject of power factor correction, the report includes two charts which indicate that it can be corrected at a lower cost by means of capacitors used in conjunction with induction motors, when the motor size is 75 hp. or lower, and that costs favor the use of synchronous motors for larger load requirements.

In the discussion a member asked if sealed-off rectifiers might be used in place of the copper oxide or selenium type for charging batteries; the chairman replied that the seal-off type is not practical in sizes lower than 100 kw.

## Locomotive Equipment

A means of focusing and aligning headlights is described in the report on locomotive electrical equipment. It offers the advantage of doing an accurate job and requires only 100 to 200 ft. of track in front of the locomotive. The customary practice requires a straight section of track from 800 to 1,200 ft. in length. A similar aiming device for prefocused lamps is also described in the report.

The report offers two alternate arrangements for connecting electric air brake trainlines between the rear of a tender and the first car, or the rear of the tender and a second locomotive, when two or more locomotives are coupled together. The suggested arrangements employ standard plugs and receptacles, and are shown in drawings in the report.

The third section of the report, with the aid of drawings, describes best methods for reducing shock and vibration to headlight cases and lamps.

Sealed beam locomotive headlights, similar to those used on automobiles, are being tried out on an experimental basis by some of the eastern railroads. The lamps are 7 in. in diameter and are rated 200 watts at 30 volts. One road is trying two such lamps with super-imposed beams as a regular headlight and another is using a single sealed-beam lamp as an emergency unit. Adapters have been made to mount two sealed-beam units within the circle of a 14-in. headlight. Concerning these lamps, the report states:

"The advantages of sealed-beam lighting are many when compared with the present-day system. Since the fila-



ment, reflector and clear cover glass are integral, the need for focusing and cleaning of reflectors and lamps is eliminated. The depreciation in beam candlepower throughout the life of the filament is greatly reduced, since the chamber in which the filament is operated is much larger than in the case of the present 250-watt, P-25 bulb lamp. Since the sealed-beam unit is made of heat resisting glass, it is not subject to failure due to water cracks, etc., such as encountered occasionally with the P-25 bulb lamp when used in headlight cases with leaky gaskets. Also, loose lamp bases resulting from vibration or strain are eliminated.

"The use of the 200-watt, 30-volt, sealed-beam unit offers great possibilities, especially from the standpoint of standardization. Two units operated in multiple will provide better road illumination for steam road locomotives. One unit will be sufficient for switching locomotive service."

A sub-committee was assigned to work on the question of 64-volt power from steam locomotives for the operation of electro-pneumatic air brakes. Two alternating methods were drawn up and are included in the report without a designated preference. One suggests the use of a motor-generator set of a 500-watt capacity, which will develop 64 volts from the existing 32-volt turbo-generator. The other suggests the use of a second turbo-generator rated 500 watts and 64 volts.

Another sub-committee was given the assignment of reporting on the possibilities of a.c. turbo-generators and auxiliary equipment for supplying power for radio, headlights and train control. In general, the report considers the suggestion impracticable, largely because of the prohibitive size and cost of the auxiliary rectifying apparatus required for essential d. c. loads, especially that for the electro-pneumatic brakes.

In the discussion one of the members questioned a statement in the report to the effect that one sealed-beam unit is sufficient for switching service. This, he said, infers that it is not enough for road service, and added that measurements made on his road had obtained the required pick-up at 1,000 ft., while only 800 ft. is specified. The user of two sealed-beam lamps said they will produce 400,000 beam candlepower, while a single 250-watt unit gives only 365,000 beam candlepower, and a 1,300-ft. to 1,400-ft. pick-up.

Exception was taken to a statement in the report on a.c. turbo-generators. This report states that auxiliary equipment for a.c. generators is prohibitive in size, weight and cost. The discussion brought out that it is possible to have air-cooled rectifiers, as distin-

guished from the oil-cooled rectifiers, referred to in the report. Such rectifiers, it was said, could be built for air brake service, which would cost about \$85, and weigh only 22 lb. For intermittent inductive train control an appropriate rectifier would weigh 18 lb. and cost about \$53, including transformers and rectifier. The corresponding weights and costs for the oil-cooled type referred to in the report are as follows:

Brake unit .....	958 lb. and \$600
Train control unit .....	176 lb. and \$200

## Car Equipment

The report on car electrical equipment describes a V-belt gear drive for axle generators of 10-30-kw. capacity being developed by the Dayton Rubber Manufacturing Company. It employs endless V-belts. There are no drives of this type in service, but the manufacturer expects to have two test units in operation by the end of the year. Advantages claimed by the manufacturer are reduced weight and bulk on the axle.

Cold cathode and slim-line fluorescent lamps are discussed, with particular reference to their mounting.

A Diesel-power plant for supplying power to a passenger car was tested for the benefit of a sub-committee, and the results of the test are included in the report. Results were quite satisfactory, but the equipment was later removed from the car for modification. Reference is also made to the application of such equipment on "The Train of Tomorrow," and two units which will be applied on a dining-car by the Illinois Central.

In the discussion, some concern was shown about the possibility of long fluorescent lamps falling from their sockets. It appeared that this has happened in isolated instances, but the sockets have since been redesigned to prevent slipping out.

## Car Air Conditioning

The usual method of removing air from dining cars is by means of suction fans. The car air conditioning report describes a pressurized system developed on the Southern Pacific, and reports that this system will be applied on all new cars now on order by this road. Some Rock Island cars, now in service, are using the pressurized system.

The Multi-Vent system of ventilation was recommended as a highly satisfactory means for creating draftless ventilation, and at the same time reducing the amount of dirt that gets out into the car.

A filter made under the name of "Annis," which uses water in connection with its filter arrangement, is oper-

ating between Chicago and the west coast on the Santa Fe. The report states that the equipment has made several trips with fairly good results. A humidistat is used to keep the relative humidity within, or close to, the comfort zone, and in cold weather a heating coil is used to temper the intake air to prevent danger of freezing the spray. No filter cleaning has been required up to the present time.

Under the subject of refrigeration, the report suggests the following:

It is desirable to have a door switch which will stop the ventilating fan when the refrigerator door is opened.

Because of space requirements, it may be necessary to reduce insulation thickness from 5 to 4 inches.

A steam coil may be used to temper air coming into a refrigerator condenser in cold weather.

A germicidal lamp may be used to destroy bacteria in the refrigerator.

Where a.c. motors are used, they should be preferably of the 3-phase type, or permanently split capacitor type.

Drinking water coolers in room cars may need to have sufficient capacity for taps in all rooms.

Mechanical dining car refrigeration is satisfactory, but improvements in controls and location of equipment are desirable. Adequate standby power facilities must be available for diners with mechanical refrigeration. More standardization of air-conditioning equipment is needed.

With the trend toward a.c. power supply, the report states that the development of a large size hermetically-sealed unit is highly desirable. To date, 5 hp. is the largest of the vane type units that has been built.

In the discussion, a representative of one railroad reported that he has had difficulty in satisfying the inspectors of the National Health Service on dining car kitchen ventilation. A representative of another road reported the use of a large exhaust fan over the range in dining car kitchens with air taken in through filters over sterilamps. The air conditioning engineer of another road said that exhaust fans are not good, since they accumulate grease and constitute a fire hazard. He advocated, instead, the use of air forced in under a slight positive pressure.

One western road has employed Electro-Air-Mat filters, and all new cars now on order will be so equipped. Another user stated that these filters may operate two or three months without renewal.

The question of fish handling resulted in the recommendation that they be put, with the ice, into the refrigeration to retard the rate of melting.

The question of maintaining refriger-

ation on diners in yards was raised by one operator. He wanted to know how long a closed box would remain at adequately low temperature without power. A manufacturer's representative said that with the outside temperature at about 90 deg. food will not spoil in less than 18 to 20 hours. Refrigerating load, he added, is about 2 kw.

A manufacturer's representative said the success of a sealed air-conditioning unit is dependent upon its being a packaged unit, sealed at the factory, and that it might not work well if the equipment required piping on the car. He also said that lubrication and insulation present problems in sealed units, unless they are water cooled. The internal temperatures must be kept below 200 F. deg., or the oil will break down, react with the freon, and damage the insulation. Water cooling, he added, would require about 300 gal. of water on the car.

## Radio and Communication

The committee on application of radio and communication systems to rolling stock has done a piece of work of primary importance in its preparation of specifications for electric train lines for communication and entertainment. The plugs and receptacles which have been agreed upon by the committee, working with five electrical manufacturers and two car builders, will have 14 contact points. The two receptacles required will fill the only available space over the vestibule. Complete specifications for plugs and receptacles are included in the report.

An investigation of the subject of caboose power supply disclosed that a large majority of railroads employ axle generators, that a few use engine generators, and a very few use straight storage battery systems.

Quite complete specifications for radio receiving sets, used for entertainment on passenger cars, are included in the report. They disclose the fact that the average stock receiver is not rugged enough to stand the continued shock and vibration encountered in train service. Two types of suitable antennas are suggested.

In the discussion, the committee chairman specifically commended, for their help and cooperation in designing train connectors, the following companies: The American Phenolic Company, The Pyle-National Company, the Albert & J. M. Anderson Manufacturing Company, the General Cable Corporation, the Cannon Electrical Development Company, the American Car and Foundry Company, and the Pullman Standard Car Manufacturing Company.

Attention was called to a 3-kw. gear axle drive for baggage cars, mail cars, cabooses, etc., being developed by the Spicer Manufacturing Company and on trial in railroad service.

The discussion was concluded by a railroad representative, who suggested that the committee should not lose sight of the possibilities of a 12-volt caboose power system until more is known about the overall problem.

## R. E. S. M. A. Elects Officers

At the business meeting of the Railway Electric Supply Manufacturers Association the following officers were elected: president: L. A. Spangler, Westinghouse Electric Corporation, Chicago; senior vice-president: G. B. Miller, Loeffelholz Company, Milwaukee, Wisc.; junior vice-president, B. G. Durham, Albert & J. M. Anderson Manufacturing Company, Boston, Mass.; directors (for three years): W. M. Adrian, Luminator, Inc., Chicago; W. A. Ross, Pyle-National Company, Chicago; A. E. Swedenborg, Benjamin Electric Manufacturing Company, Des Plaines, Ill.

## B. & O. Freight Traffic Men

(Continued from page 41)

great detail by local experts. From 5 to 20 pages of text describe the general traffic and transportation situation at each point of inspection and include a separate, detailed map for each city, with railroad facilities—such as team tracks and piers—spotted by reference numbers. The second manual covers specialized departments and their functions, including not only segments of the traffic department, but other departments of the railroads, the functions of which are of interest to traffic men. After the course each student retains his manuals as a valuable personal reference file.

## Clears Up Mysteries

The chief value of the tours is that vague impressions of distant facilities, gained from tariffs and maps, become realities. No longer is the Akron & Barberton Belt, for example, an unknown quantity to a representative at Philadelphia—or the subsidiary Staten Island Rapid Transit at New York a mysterious tariff item to an off-line representative at Atlanta, Ga. Now, with a trip over the B. & O. behind him, a freight salesman at Baltimore may,

with absolute self-assurance, recommend routings through the complicated Chicago or St. Louis gateways; a representative at either of the latter points may describe in detail his railroad's pier facilities at Baltimore.

Success of the program cannot be measured, of course, in terms of monetary gains versus operating costs, but the enthusiasm exhibited by those who have thus far taken the trips attests to the value of the program. It has proven more than an educational device—it has created an added sales incentive in those who have participated. And it is what the Army would call "good for morale."

## COMMUNICATION . . .

### Facts Scrambled

LONDON, ENGLAND

TO THE EDITOR:

In an article in your issue of August 16, last, entitled, *European Railway and General Conditions Badly Scrambled*, by Fred A. Poor, it is stated that the London, Midland & Scottish Railway is the only British company operating sleeping cars—and on its route to Scotland.

This, of course, is entirely incorrect.



The Great Western Railway, for instance, has operated sleeping cars on its main line routes since December, 1877. I enclose for your information copies of photographs of the newest first-class stock in use.

The article also infers that the L.M.S. is the only British railway using the American type of flat-bottom rail. In point of fact, the G.W.R. will by the end of the year have laid 42 miles of track of this type and a further 40 miles is planned during 1948.

C. S. Lock  
Press Officer,  
Great Western Railway.





The ravages of tie-plate cutting are plainly evident in those ties which have been removed from track after less than 10 years' service

# Research to Improve Crossties Urged

By C. A. RISHELL

Director of Research  
National Lumber Manufacturers  
Association

**Wants railroad and lumber industries to pool  
their resources and knowledge in a program  
to reduce or eliminate mechanical damage**

**MY PURPOSE** is to present a picture of what the lumber industry would like to do to help the railroad industry improve the service of wood crossties. In our industry we have operators who produce lumber and ties, operators who produce ties but no lumber, and still other operators who produce lumber but no ties. In fact, the latter are in the majority and it can be assumed that this segment is only mildly interested in tie research. But as an industry we are interested in all lumber products and I think it befits us as a group to join with the railroad industry in working out its problems in the use of wood. In fact, the lumber industry has indicated that it is willing to do this providing the railroad industry is willing to cooperate.

From the financial standpoint the expense should be borne jointly between the owners of the lumber industry and the owners of the American railroads. From the standpoint of developing technological research the responsibility is also equally divided between the lumber industry and the railroads, but, whereas the money must come through the stockholders and management, the pooling of

knowledge for the technical investigations must come through organizations such as the Roadmasters' Association, the American Railway Engineering Association, and the National Lumber Manufacturers Association.

The N.L.M.A., through its Committee on Products and Research, has proposed a program for research calculated to reduce mechanical wear and end splitting of railroad ties. It is anticipated that the research project can be adequately financed for approximately \$40,000 a year for three years, 50 per cent of this amount to be furnished by the lumber industry and 50 per cent by the railroads. The probability is that these funds can be obtained before the end of the year. If this is so, the proposed research can be undertaken early in 1948.

In successfully promoting a project for research on crossties, it is first necessary to prove to those who are interested in producing and using ties that there is some necessity for spending money on the undertaking. Forty thousand dollars annually for a few years is not a great sum when one compares it with the cost of research in some fields. For example, during the war a research program to develop laminating systems for ships timbers was undertaken at a cost of \$700,000. Another

project to develop laminated wood flooring cost half a million dollars, but both of these activities were conducted by the federal government during wartime when money was no object. In developing improvements for railroad crossties we are dealing with industries where any amount of money expended, no matter how small, must be so utilized that the principal, with interest, is eventually returned in some form or other.

In promoting the proposed project we have had two hurdles to deal with. One of these is the lumber industry. Most of the companies comprising this industry do not produce ties. The majority of the ties are made by small firms who ordinarily do not support research or association activities. Therefore, many of our people could not see a direct benefit to them in this type of research.

## Wood Tie Not Perfect

Furthermore, quite a wide section within the lumber industry held the opinion that the wood crosstie is such a perfect product that its performance cannot be equaled by any other combination of materials. Simply because the wood tie has been the standard for many years, and because other materials which have been tried have not been too successful, the idea is prevalent that wood can never be displaced for this purpose. But anyone who has studied the markets of the lumber industry over a period of years can discover the fallacy of such complacency. There is no reason to believe that wood is the only material which will perform satisfactorily under the service conditions imposed on crossties.

I am convinced that there are several materials which, if thoroughly investigated and improved for the service,

Abstract of an address presented before the annual convention of the Roadmasters' and Maintenance of Way Association at Chicago on September 16.

would probably afford the wood tie much competition. Therefore, it behooves the lumber industry, if it cares to retain this market, to improve the wood tie to such a point that its popularity cannot be displaced by any other material. That is the reason why the lumber industry can afford to spend \$20,000 a year for the next three years in order to improve a product used almost exclusively by the American railroads.

On the other side of the picture are the railroads. It is not seemly for me to speak of the complacency of industries other than my own. To do so is to incur the risk of offending those we should like to attract into undertaking a co-operative program. In fact, I cannot offer too much proof that the railroad industry has been complacent. Nor can I say definitely that the railroads have not energetically carried on research for the reduction of mechanical damage to ties.

I can only say that, so far as we know, with the single exception of preservative treatment, the railroad tie used in 1947 is to all intents and purposes the same product that was used in 1847. It is true that the ties may be of greater dimensions; they may be prebored; and they may be "placed" by mechanical means. On the other hand, loads are heavier, speeds are higher, and perhaps some of the railroads using extremely hard and dense species have for economical reasons

changed to softer and less wear-resistant species. On the whole it can be safely said that the railroad tie today is no more wear resistant than it was a century ago.

I have calculated that it costs the railroad companies \$4.50 or even \$5.00 to purchase and lay a tie in track, and this does not include the cost of transporting the tie from the lumber mill or the woods to the treating plant. A few years ago the cost was probably only a half or a third of this amount. Heavy-duty, main-track ties in place will probably cost much more than the figures mentioned, and there are also probably areas where the cost of installation is greatly increased. Diminish or increase the amount of my estimate as individual experience suggests, but in any event I think it will be agreed that the day of the \$1.00 tie is long since past and that we must now think in terms of \$5.00 for a tie replacement.

### Life Expectancy of Ties

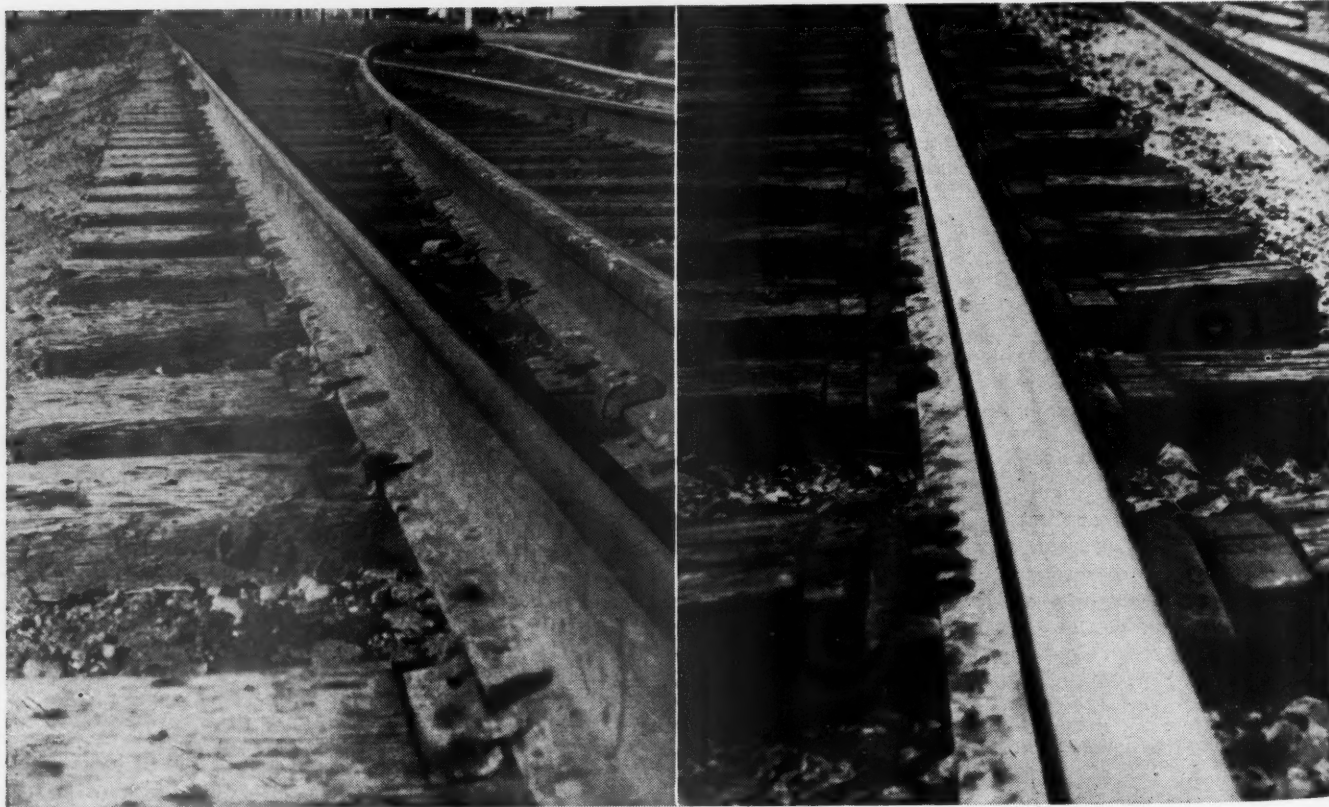
It is also going to be essential to adapt one's thinking to certain other conditions which have developed in the past few years. Before the advent of pressure treatment for railroad ties, the average life of all classes of ties was probably from three to nine years. A round figure of six years will suffice for this discussion. It was found, by pressure treatment with preservatives,

that the life of the crosstie was increased from three to five times. Here again, without offering supporting statistics, I venture to say that an assumed average of 25 to 30 years for the life of a tie is responsible for more unsound thinking than any statistics that have come to my attention.

The average of 25 to 30 years includes all kinds of ties. I do not know how many of them are in main lines, or how many are in sidetracks or other places where mechanical wear is a slight factor, but I have been told that many railroads make a practice of removing worn ties from main track to be used for replacements in sidetracks and other places where mechanical wear is not important. Unfortunately, railroad management, in some cases at least, uses these figures. Perhaps some of the maintenance-of-way people also are misled. It is true that before the advent of preservative treatment the average life of crossties was only six years. This average probably held in most all situations, including main lines, minor lines and sidetracks. The organisms which cause decay do not discriminate between main lines and branch lines. Unlike mechanical deterioration, decay is pretty much uniform for all situations.

Some time ago the *Railway Age* reported that, during the period 1927 to 1943, inclusive, 58.5 per cent of the ties in the test tracks of a middle-western railroad failed from mechanical

Left—Typical example of how tie plates are forced into ties (in this case oak) as the result of impact, abrasion, etc. Right—As the result of mechanical damage at the tie plates many of these ties will soon have to be renewed, although they have all been in track less than 10 years





damage and only 16.7 per cent of the tie renewals in these tracks during this period were required primarily because of decay. Evidence is available to show that ties in the main lines of large railroads have deteriorated through mechanical wear in a period of six to seven years. In any event it seems evident that crossties in heavy-traffic territory must be replaced frequently and that a life expectancy of 25 to 30 years in these situations is wishful thinking.

### Possibilities from Research

It is in order to discuss the possibilities for improving ties through modern research. A desk leg, for example, is made of gum lumber and walnut veneers, which in themselves are not very hard materials. Ordinarily a piece of gum or a piece of walnut could be very easily dented and otherwise damaged by a sharp blow with another piece of wood. I can pound this beautifully finished wood in a manner that would destroy a normal furniture part, but in spite of this abuse it is in no way damaged.

This isn't a miracle. It is a result of research. It is indicative of the way in which the properties of wood can be changed to meet modern conditions. I do not pretend to tell you that a railroad tie could be constructed as this desk leg has been constructed. I do not want it to be inferred that a similar treatment for ties would result in improved resistance or that such similar treatment would be economical. The point is that wood can be changed physically to provide it with entirely different properties than it has in the natural state.

Here is another example to illustrate how the natural properties of wood can be changed in accordance with the service conditions of a specific product. To lay a lighted cigarette on the top of a highly finished piece of furniture would, under ordinary circumstances, result in severe damage. The burning of a cigarette on the face of a fabricated section taken from the top of a desk has no visible effect, however.

There is nothing mysterious about the treatments used for either of these pieces of wood. In the case of the hardened desk leg the surface of the wood was treated chemically and then compressed slightly. This combination of increased density through compression and the addition of a resin caused the surface of the wood to become several times harder than normal. The process used to make the burn-proof desk top is somewhat more complicated. It consisted of inserting an aluminum sheet between the core of the furniture top and the face veneer. The aluminum sheet is such a good conductor of heat that it prevented the surface veneer from becoming hot enough to burn.

In addition to this it was necessary, of course, to use a special heat-proof varnish.

The exact causes of mechanical wear of railroad ties are probably not known. There is such a wide variation of opinion among railroad people that I hesitate even to suggest what the causes may be. However, I suspect that the damage is caused by a combination of circumstances. In the first place we can probably assume that the section of the tie immediately beneath the tie plate is subjected to "rolling shear." This means that, due to the curvature of the rail when extreme loads are placed on it, the load is concentrated on the tie in certain local areas. These areas of contact keep shifting so that eventually the entire section of the tie beneath the tie plate is affected by concentrations of load.

A second type of damage is due to the fact that the rail pounds up and down, transmitting quick and severe impacts to the wood areas immediately under the tie plates. This force for destruction is similar to that of pounding a tent peg with a heavy mallet. Theoretically, if the tie plate is fastened securely enough to the tie, so as not to allow play between the plate and the tie, then the damage from impact will be minimized. Unfortunately, there is no known method of fastening the tie plate that will eliminate this difficulty completely.

A third factor is abrasion. As the tie plate works up and down, grit gets in between the contact faces of the tie and the tie plate. Movement of the rail either up and down or laterally will then cause abrasion.

These are a few of the factors which cause deterioration through mechanical wear. There are probably many others which are not recognized at present but which will be discovered when research gets under way. My opinion is that there has not been enough investigation to prove definitely what is causing the damage.

### Wood Technicians Can Help

No matter what causes mechanical wear of railroad ties, wood technicians in the United States are amply equipped to work out ways and means for preventing the damage—or at least minimizing it. In our laboratory we have treated tie sections in a manner that has caused the area under the tie plate to become several times harder than the natural wood. We have treated wood to increase its abrasive resistance. We produced laminated wood members to combine species of varying densities, thus providing soft wood where it is suitable and harder wood where necessary. We can treat wood so that it will shrink and swell very little, probably only a few per cent of the amount of shrinkage

which can be expected in normal wood. We know how to glue wood together so that it will not come apart at the joints under any circumstances. We know how we can make wood plastic and how we can make it more rigid. We know how it can be treated to prevent fire damage. It would seem, therefore, that all that is necessary is to apply our present knowledge to the problem of improving the wood crosstie.

Many of the processes which have been developed in the laboratory, however, are only laboratory curiosities. For example, no advantage would be gained in treating a railroad tie so as to make it 200 per cent harder if, at the same time, the cost of the tie were increased several hundred per cent. The railroads could not afford to use such ties any more than they can afford to continue using \$5.00 ties in the reckless way they are doing today. Furthermore, corrective treatment cannot be applied until more is known about the conditions we are trying to correct.

The economic phases of producing an improved railroad tie are as important, if not more so, than any other part of the development. It is probably that part of the investigation which is going to cause the most trouble. It can be anticipated that anything that may be done to improve a tie will add additional cost to the product. This is a conditional statement because it may be possible that an improved but cheap type of tie plate could be developed, or that a new low-cost type of rail fastener could be made, or that certain inexpensive species of wood could be used, etc. However, the likelihood is that an improved tie will cost even more than the present product. How much more the cost will be and how much improvement can be obtained are the two important questions. The answers can only be obtained through research.

The lumber industry, because of the various wood products laboratories that are now available to service it, is in possession of a great deal of technical knowledge on wood, its properties, characteristics and serviceability. The scientists and technicians who work in these laboratories probably know more about the physical properties of wood than any other group. Conversely, the railroad people know more about their particular problems than any other group of people. Certainly the technicians and scientists in the lumber industry are not adequately acquainted with the problems which are encountered by railroad men. A project of this type can only be successfully undertaken with the cooperation of all concerned. If the lumber industry with its knowledge of wood can join forces with the railroads with their knowledge of service, then, provided the project is adequately financed and ably managed, the job can be done.

# P. T. O.s Size Up the Latest Competition

Passenger officers hear Norris and Harding at Asheville meeting;  
discuss plane and bus rivals; recommend permanent research body

A TOTAL of 195 members and guests of the American Association of Passenger Traffic Officers convened in 84th annual session at the Grove Park Inn, Asheville, N. C., October 15-17, to carry out an intensive program of reports and discussion featuring new services and the latest tricks of rival agencies of transport, and to hear addresses by Ernest E. Norris, president of the Southern and Carroll R. Harding, president of The Pullman Company. Retiring president Frank L. Jenkins, general passenger traffic manager of the Southern headed up the proceedings as the climax of his three years in office; played host to the entire membership in several social events; and was the recipient of a special gavel made of woods representative of the steps in his career.

The members voted to urge establishment of a permanent research body to study passenger traffic possibilities and to support the concept of the regulation of all transport agencies by one regulatory authority. The members also heard talks by Senator Clyde H. Hoey of North Carolina and by a group of women staff members engaged in railroad passenger operations.

Elected to office for the forthcoming year were: President, Albert Cotsworth, Jr., passenger traffic manager, Burlington System; vice-president, Edward D. Osterhaut, passenger traffic manager, Reading; and (re-elected) secretary-treasurer, B. D. Branch, retired general passenger agent, Central of New Jersey. C. D. Bell, passenger traffic manager, Seaboard, was elected chairman of the executive committee.

## "Fight One More Round"

Taking as his text the title of a verse written by "Gentleman Jim" Corbett—"Fight One More Round"—Mr. Norris admitted that, while he would "find it more satisfying to direct a few plain and fancy cuss-words towards those factors, wholly beyond our control, that are casting a dark shadow over our industry," nevertheless, he finds it more productive to "light a candle than to curse the darkness." The "candle" he labelled "courage"—"the courage of the open mind that utilizes to the utmost its concomitants of imagination and resourcefulness."

The Southern's president went on to



Albert Cotsworth, Jr.

recall that when the association last met in Asheville—in 1901—the automobile and the airplane were just being born; today the railroad industry must summon every resource to meet these "lusty competitors." A key factor in successful competition by the railroads Mr. Norris characterized as "humanizing railroad service," a job more difficult for them than for their rivals because "ours is a mass transportation service; we carry passengers by the trainload and that makes it difficult for us to match the airplane and the bus in establishing a friendly, intimate relationship with our customers." This humanizing process is particularly the job of the passenger department, according to the speaker, because it is "the point of contact" with the majority of railroad customers.

When the passenger men met in Asheville in 1901, said Mr. Norris, the carriers didn't have to sell railroad transportation—it was "bought." "But the time has long since passed when railroads, to paraphrase Elbert Hubbard's saying, could seat themselves on a stool in the middle of a field and expect the cow to come to them when they wanted milk. Today, we've got to go to the cow." In this connection the speaker urged that everyone in the business sell the intrinsic advantages of railroad travel, which he enumerated as safety,

comfort, convenience and dependability—"valuable 'seconds' to have in our corner as we fight one more round in today's highly competitive field of transportation."

## Faricy On Revenues

Introducing Mr. Norris was William T. Faricy, president of the Association of American Railroads, who expressed determination that adequate revenues for the industry will be forthcoming because the railroads do not intend to falter in their fight for a six per cent return. Pointing out that the railroads "have performed an epic service this year," he asserted that "we must keep the roads as the bellwether of our private enterprise system." Referring to the railroads' safety record as "an incomparable asset," the A.A.R. chief expressed the opinion that "passenger business will not do the disappearing act" and that the railroads will recapture much passenger traffic from competitors and from the private automobile. As for the crisis we now face, he made the claim that "the railroad business is one for fellows used to dealing with problems."

"Pullman Sleeping Car Service; What It Is, What It Does, What It Stands For" was the title of the address presented by Mr. Harding. After tracing the development of Pullman's unified, country-wide service, the speaker went on to review the seven years of litigation leading up to the railroads' ownership of the company and the arrangements now existing in the "interim period" which will close on or before December 31, 1948. "The present plan under which Pullman operates," he declared, "cannot endure—it is too restrictive." Regarding the transformation of Pullman into, or sale of its properties to outside, independent interest, as provided in the contract with the buying group of railroads, Mr. Harding said: "No concrete proposals have been made or received up to this time to carry out these provisions, although we know that several different interests are giving the subject consideration."

Regarding profit prospects, Mr. Harding said that the recent Pullman rate increase was almost completely absorbed by the wage increase made effective on Pullman and railroads alike 30 days earlier. "Profit prospects for 1947 are



still lower than 1946, and 1948 is a still more serious problem." He asked for the cooperation of the passenger traffic officers in helping his company effect drastic economies, such as "withholding demands for unremunerative special service and by anticipating requirements for special movements in order to avoid expensive emergency measures."

Respecting the future of Pullman, the speaker declared: "In my judgment it would be extremely unfortunate if anything should happen to disrupt this unified system or disintegrate this nation-wide, coordinated organization. Any fragmentation of the service or organization would be destructive of efficiency and disadvantageous to the railroads from the standpoint of the operation of an economic and practical sleeping car service. It would not be in the public interest and would be detrimental to the railroad passenger service as a whole throughout the country."

(A more detailed summary of Mr. Harding's address will appear in a subsequent issue of *Railway Age*.)

In introducing his chief, E. P. Burke, passenger traffic manager of Pullman, said that after "seven long and weary years of litigation," the company now enters "a new and closer relationship with the railroads."

### The Womanly Touch

The passenger officers heard from a group of members of the National Association of Railroad Women, who met in concurrent, though separate, sessions.

Miss Velma McPeck, supervisor of passenger train service, Burlington System, declared that travelers want a comfortable, home-like atmosphere and are willing to pay for it. Since a home "needs a woman," she saw a need for women in the passenger business—not to usurp men's jobs but to add something new to the business. Speaking on "Women in Passenger Traffic and Solicitation," Mrs. Ioan Beckham, passenger representative, New York Central, pointed to the field of women's clubs and business and professional women as a rich field for passenger sales, but one in which it is difficult for men to work—especially the tea parties. She asserted that she had all the chores which the male representatives have, including riding specials and week-end work, but that she functions in a specialized sphere. Miss Olive Dennis, special engineer with the Baltimore & Ohio, and a graduate civil engineer who, "originally wanted to build bridges," related the wide range of her research into all points of passenger service and equipment. There are many important elements in passenger service which men overlook. For example, she said, "men cannot possibly know what goes on in the women's dress-

ing room." It was her opinion that the railroads need a higher level of cleanliness and attractiveness on all their trains, rather than more luxuries on a few. In this endeavor, "a woman can supplement the work of men without necessarily supplanting them."

Miss Virginia Hess, inspector, maintenance of equipment, Pennsylvania, said she had been appointed to study the cleaning and care of passenger rolling stock, in which endeavor the chief necessity is to "follow through." Miss Vera Elvert, superintendent of hostess service, Gulf, Mobile & Ohio, recalled that her road established hostess service 12 years ago with the idea of staffing the trains with cultivated young ladies who could make the passengers feel at home.

Miss Wanda L. Myers, assistant to general passenger traffic manager, Southern, and only woman member of the A.A.P.T.O., took as her theme "There is a place in railroading for the *right* woman just as there is a place for the *right* man."

### Committee Reports

The meeting heard and discussed four special committee reports regarding developments in passenger service of the railroads and of their chief competitors. The report of the Committee on Developments and Improvements in Train Service and Equipment, chairman, A. Cotsworth, Jr., pass. traf. mgr., C. B. & Q., was the result of intensive review and study and will be set forth in a subsequent issue.

The Committee on Research, J. W. Higgins, chairman, asst. gen. pass agt., N. Y. C., urged the reappointment and perpetuation of the recently-dissolved passenger committee which worked under the over-all A.A.R. research project. The committee expressed the belief that the action of the A.A.P.T.O. at its Del Monte (Cal.) convention in urging the A.A.R. to establish a permanent agency for passenger traffic research had "some effect" upon the later appointment of the study committee. It recommended that the passenger officers seek the establishment of a sub-committee to the permanent passenger committee of the A.A.R. to consist of "qualified research workers who can devote their entire time to the search for innovations necessary for the continued progress of passenger service."

The report expressed the conviction that "our interests lie in subordinating intra-industry rivalries to the necessity of meeting the challenge of other modes of transportation" and called for the application to railroad passenger traffic of concentrated research of the type common in outside industry and in other spheres of railroading itself. It suggested as subjects:

- Passenger traffic personnel
- Optimum pricing
- Sales, standards, controls and management
- Reservation procedures
- Ticket office and ticketing procedures
- Inter-company procedures
- Divisions of passenger fares
- Passenger tariffs
- Dissemination of information to employees, patrons and other roads
- Compilation and use of statistics
- Transportation tax
- Fare structures
- Hotel reservation bureaus
- Unremunerative local and branch line trains
- The membership of A. A. P. T. O.

unanimously approved the recommendation.

The Committee on Motor Coach Service and Competition, I. G. Miller, pass. traf. mgr., M. P., chairman, emphasized that the present consolidations in the bus industry will bring keener competition because the big companies will be able to hire more experienced traffic experts and spend money for new business. It foresaw heavy commitments for immediate highway improvements and extensions, the allocation of radio frequencies for long-haul bus carriers, an intensive and successful bus safety program, and increasing bids for long-haul business with through equipment over the routes of several carriers, as important factors towards intensified service competition. Late this year, or early next, bus manufacturers will start to turn out a new type of 41-passenger, air-conditioned parlor coach, which will enable the operators to handle a greater number of passengers in one vehicle; eliminate second sections; and reduce the greatest item of expense in producing a seat-mile. Further, said the report, "with the availability of additional motor coach equipment, bus lines will be able to effect material savings, as new buses can be maintained at much less expense than the older equipment which the lines found necessary to use during the past few years."

The report also referred to the inroads by charter bus operators in the handling of special parties by providing direct pick-up and delivery of individuals and groups. To attract this business, some lines provide "club-bus" equipment, with radio, bar, running water and air-conditioning. The entire bus industry is engaging in an integrated campaign for tour and all-expense traffic and is advertising through routing between such distant points as New York and Mexico City.

The rosy and the dark sides of the future of air line competition were delineated in considerable detail by the report of the Committee on Commercial Aviation Development and Competition, C. H. Gattis, asst. pass. traf. mgr., S. A. L., chairman. Speed record succeeds speed record; seat capacity increases by the month, rather than the

year; a writer for a national publication estimates domestic air travel may exceed bus travel by 1948, and rail patronage by 1960. With respect to subsidy, not only do cities vie to grant airport facilities free in whole or in part, and does the federal airport plan anticipate 333 new Class I and 2 airports in the current year's program, with improvements in more than 400 additional airports, with a cost to the federal and state governments of over \$70 millions, but, as well, there is a movement afoot to ask straight subsidy of the air carriers themselves, on the ground that "air transport is sick." Charter planes continue to cut into the business of regulated carriers of all types, free of rate and route restriction.

On the other side of the picture, the report pointed out that, due to rising costs, adverse weather and less-than-anticipated traffic, original post-war air expansion programs have been curtailed. Only National, Eastern and United, of the big lines, showed profits in 1946. In March, 1947, the higher-fare school won out and a 10 per cent air fare increase obtained. This generally restored the rate level which was in effect in 1944.

Regarding comparative service, the report said: "Air schedules are still far from dependable, especially where transfers en route are involved. The elements have yet to be conquered. Additional high-frequency beams, radar and other refinements are being developed, but flying during storm and fog is hazardous. All of us have experienced exceptional loads on short notice due to grounded planes. Flights back up. Recently a passenger holding Boston to Atlanta air transportation found at New York a back-up of three days cancellations, due to weather. He took a train and kept his engagement. He swore, 'Never again.'"

The Standing Committee on Association Ticket Paper, H. C. Duvall, pass. traf. mgr., C. & N. W., chairman, reported that no abnormal delays had occurred in the delivery of paper to licensed ticket printers and that the price of paper had been increased to \$8.75 per ream effective February 1. The Standing Committee on Standard Forms of Interline Tickets, A. B. Chown, Trunk Line-Central Passenger Association, chairman, reported that it is studying the feasibility of using inks for mixed-class tickets which will contrast with the color of the paper and at the same time differentiate the classes. It recommends, among other things, that the roads adhere to the standard forms of interline tickets as promulgated January 1, 1941, since deviations therefrom increase the work of the accounting departments in examining coupons and checking reports.

The Standing Committee on Official Digest of Fares and Divisions, A. C.

Linton, pass. traf. mgr., Illinois Central, chairman, reported that there are presently a total of 339 copies of the Official Digest under subscription by roads and government agencies. The present Digest contains 443 pages as follows:

352 pages of division notes and joint circulars

31 pages of short line mileages

2 pages of bridge and ferry arbitraries

58 pages of transfer arrangements

Revised pages have been issued twice a year.

### Credit Card Use

During the first few months of operation, rail travel credit cards have been used for over \$2 million of transportation, and about 62,000 cards have been issued—18 per cent to individuals and the rest for company account. A total of 47 railroads are participating in the plan—all of the major roads except the southern lines and the New York, New Haven & Hartford and Southern Pacific. These facts featured a special report made to the Association by H. W. Siddall, Interterritorial Passenger Committee, chairman. He reported that it cannot be determined now whether the plan has brought increased business. At any rate, the main purpose of its adoption was to prevent the loss of patronage to air lines by reason of their travel card advantages.

The Rail Travel Loan Service initiated on varying dates subsequent to August 20, 1947, has proven successful, in the opinion of the banks which were leaders in the arrangement, despite the fact that it was started after the summer vacation period had ended and before the opening of winter excursion travel. The average loan made has been between \$185 and \$200. Mr. Siddall emphasized that the borrower deals entirely with the bank and the railroad assumes no liability for collection. Interest rates vary with local situations, but in no case are they higher than the going rate for ordinary personal loans. To date, arrangements

have been made with banks in 642 cities, in the majority of which one bank handles the business, to avoid competition between banks and between railroads, although no rule regarding exclusive rights is in effect.

Rail-Auto Service, re-instated effective July 1, 1947, is now in effect in 226 cities. Whereas, before the war, separate arrangements were in effect in the East and West, the present plan is country-wide. It is founded primarily on the services of the Hertz Drive-Yourself system, although other companies participate. Although no money responsibility falls upon the railroads, the service is reported to be of great advantage to railroad passengers, "and indications are that it will be taken advantage of in a large way."

Mr. Siddall reported that from the formation of the Rail Travel Promotion Agency on June 1, 1946, to September 24, 1947, tourist agents sold \$10,468,122 worth of rail transportation. At present 700 Class O agents are members, payable on all classes of travel under the plan, while there are 41 Class P agents who are paid only on parties of 18 or more.

### Exhibits

Exhibitors of specialized equipment at the meeting included:

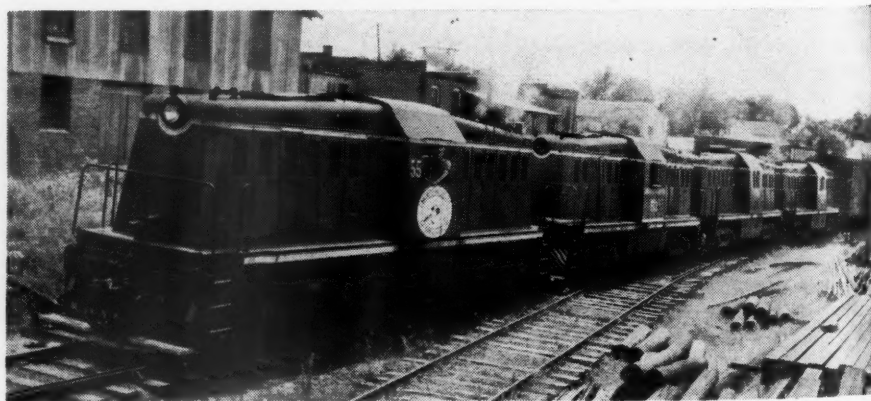
National Cash Register Company, Dayton, Ohio, showing ticket accounting machine, ticker printing machine, and dining car cash register. Presented sound-slide film on mechanization of ticket accounting and issuance.

General Register Corporation, Long Island City 1, N. Y., showing "Automatic" ticket issuing machine.

Trans-Meter Corporation, New York 5, N. Y., showing an automatic vending and change-making machine for use by suburban passengers.

Sound Scriber Corporation, New Haven 4, Conn., showing a recording and play-back machine for use in office dictation and recording of conferences.

Doubleday, Doran Publishing Company, New York, presenting plan for sale of restricted list of best-sellers on trains.



Four 500-hp. Whitcomb Diesel-electric locomotives haul a trainload of textiles out of Lancaster, S. C., on the Lancaster & Chester, now completely Dieselized



# GENERAL NEWS

## Need Militant Public Opinion, Faricy Says

A. A. R. president on program of short-line meeting; J. M. Hood reelected

The need of the day in railroading is an active, militant public opinion determined to have an efficient, ever-improving transportation machine owned and operated by private enterprise and willing to pay the price to maintain it, William T. Faricy, president of the Association of American Railroads, said in New York on October 22 in an address at the thirty-fourth annual meeting of the American Short Line Railroad Association.

"It is essential to our American way of life as we now know it that the railroads survive," Mr. Faricy continued. "They are holding the trenches of our private enterprise system and if they fail does anyone doubt that other business, the banks and the coal mines for example, will soon follow? And tied to private enterprise is the liberty of the individual, his right to go where he pleases and do what he will, to try out his gifts and his talents in such business or profession as he will, to stand or fall on his own merits, and even if he fails, his great right to pick himself up out of the dust, brush himself off and be free to try again.

"But the railroads cannot stay privately-owned and privately-operated unless the regulatory authorities permit them to earn enough to maintain and improve their properties and pay a reasonable return to those whose money is needed to keep the enterprise going," he added. "Railroad wages and payroll taxes have gone up 75 per cent since 1939, the last year before the present war-induced inflationary cycle started. The prices of what the railroads buy have gone up 87 per cent. Farm prices have gone up over 200 per cent. The wholesale price index is 100 per cent over what it was in 1939. But freight rates are up only 28 per cent and passenger fares only 13 per cent. The railroads simply cannot keep up the efficient transportation machine that the country must have on that kind of lack of balance between what they take in and what they pay out. That is why the railroads are pressing their freight rate increase petition to the Interstate Commerce Commission."

Mr. Faricy said the 9 per cent increase received earlier this month is heartening to the industry because it shows a realization on the part of the I.C.C. that the railroads must have emergency income to meet emergency expenses. But for the long pull, he explained, the increase is

not half enough. The railroads are entitled to as fair a rate of return on the net investment in their properties as other utilities enjoy, say 6 per cent. Out of that 6 per cent must come the money or the credit for the additional investment that must be made in the railroad properties if they are to handle the demands of the country in peace and in war. The railroads will press on for a fair rate of return until the goal is attained.

"In the decade of the Twenties," Mr. Faricy went on, "the railroads made a return which approximated what was fair, and what happened? Out of it came the improved plant and equipment which in the depression Thirties looked like surplus. The men who spent the money were criticized for having overbuilt the plant and for having bought too many freight cars. But when world war II came along, those men were hailed as the saviours of the transportation machine of the country, as indeed they were. The railroads could not possibly have done their part in winning the war without that additional plant and equipment bought with the money the railroads had been permitted to earn and to borrow in the Twenties. The railroads are asking now for the same kind of intelligent treatment they received in the Twenties so they can build for the next war, if there is to be one. Nobody in this country wants war, but if another war is forced upon us, the railroads intend to be ready.

"In the meantime, what is the performance of the railroads that justifies public opinion in being on our side?" Mr. Faricy concluded. "What about the freight car shortage and the complaints one hears as a result? Certainly, there is a freight car shortage and a bad one—worse than at any time in the present cycle—about 40,000 cars a day, to be specific. But in 1922 there was a shortage of freight cars over four times that much and the country lived through it. Today the railroads are moving more tons of freight more miles than ever before in time of peace. They have moved so far this year more carloads of freight than they did in the same elapsed portion of any of the war years, and with fewer freight cars. . . . The railroads have on order 115,000 freight cars—more than the car builders can construct for the next year and a quarter at present rates of production. . . . So the railroads fight on, doing the best they can with the equipment they have. They are beset by many problems, but they have not broken down and they are not going to break down. Anyone who fears they are does not reckon with the courage, the stamina and the resilience in this great industry."

During the business sessions of the Association meeting, J. M. Hood, president, and C. A. Miller, vice-president and general

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## Supreme Court O.K.'s Rock Island Revamp

Upholding results from refusal to review case; I. C. C. chided by Rutledge

With Justice Rutledge chiding the Interstate Commerce Commission for having rendered the matter "highly embarrassing" without offering any aid, the United States Supreme Court on October 20 refused to review a ruling of the Circuit Court of Appeals for the Seventh Circuit which reverses an order whereby the federal district court at Chicago would have sent the Chicago, Rock Island & Pacific reorganization plan back to the commission for reconsideration. The effect of the Supreme Court's action will be to require district-court approval of the plan which has been approved by the commission.

At the same session, the Supreme Court also announced its denial of petitions for review of lower-court decisions upholding the consummation of the St. Louis-San Francisco's reorganization plan. And it refused to reconsider its June 23, 1947, order denying a petition for review of lower-court decisions approving the New York, New Haven & Hartford reorganization plan. This petition was that of a protective committee for bonds of the Old Colony.

The commission letter which drew the chiding from Justice Rutledge was that written by Chairman Aitchison to Chief Justice Vinson on October 9, and made public by Senator Reed, Republican of Kansas, at an October 14 press conference when the senator also announced that he had deferred public hearings in connection with the investigation of the commission's administration of railroad reorganizations, which is being conducted by a Senate interstate commerce subcommittee under his chairmanship. The Reed procedure was protested by another member of the subcommittee, Senator Hawkes, Republican of New Jersey, who issued an October 20 statement, saying that he had not been consulted about the press releases issued by the Kansan, and that, if he had been consulted, he would have "admonished against such a course on the simple ground that I do not believe it is a proper thing to bring any outside influence to bear on so vital and important a matter as is now before the Supreme Court."

As noted in the *Railway Age* of October 18, page 70, the Aitchison letter to Chief Justice Vinson said, among other things, that since the Rock Island plan was sent to the district court by the commission, "there have been material changes in the

(Continued on page 60)

## Scans Readiness for Foreign-Relief

Krug report suggests retention of controls to maximize car utilization

Controls designed "to extract maximum utilization out of railroad freight-carrying equipment" should be continued at least until "late in 1948," according to a report on "National Resources and Foreign Aid," which President Truman has received from Secretary of Interior Krug. The report predicted that the freight-car shortage will not be as "critical" next fall as it is at present, if production in 1948 "approaches the 10,000-per-month goal"; but it also said that the railroads should place in service a "minimum" of 180,000 freight cars per year for the next five years if they are to be "in a safe position to take care of our expanding domestic needs and export requirements."

The study is the first of three dealing with the foreign-aid problem. It covers the physical aspects, with only incidental references to the economic and fiscal phases. "This review of our resources position shows that, from the standpoint of preserving both the national security and our standard of living, our economy in general is physically capable of providing the resource requirements of a considerable program of foreign aid," Secretary Krug's foreword said. Among the participating "experts" and "technicians" were those of the Interstate Commerce Commission and Office of Defense Transportation, but the report's conclusions were not reviewed by the participating agencies.

The other two reports will deal in turn with the economic phases of foreign aid, and the character and quantities of goods which may be utilized for foreign relief. They are being prepared, respectively, by the President's council of economic advisers, and by a committee headed by Secretary of Commerce Harriman.

The Krug report listed the transport controls it would have continued as those which: "(1) require maximum loading of freight-carrying equipment; (2) preclude unnecessary holding of equipment beyond the free time for loading and unloading of cars; and (3) require the loading of refrigerator cars westbound which otherwise would move in that direction empty." Presumably, it was referring to O.D.T. minimum-loading orders and I.C.C. service orders, although that relating to westbound loading of reefers (I.C.C. Service Order No. 104) does not "require" such loading; it is permissive.

The report, as it said, would also continue "numerous other controls, such as those on the handling of cars in ports," which "in one way or another affect maximum utilization of freight-carrying equipment." It added that "even with controls, average daily shortages are running around 30,000 cars."

Meanwhile, this discussion of transportation had got under way by recalling how the production of transport service here

was "almost doubled" during World War II. "It is generally recognized," the report said in that connection, "that the war demands for transportation were adequately met so far as the physical movement of commodities is concerned." The report then looked over figures showing the war-time distribution of traffic among the various transportation agencies, coming up with the suggestion that "with the restoration of domestic water commerce to its pre-war importance and with the rapid reconversion of the trucking industry, these two industries will tend to regain the percentage relationships (18 and 8 per cent, respectively) they occupied in 1939."

At the same time the report noted that the railroads "normally" haul approximately 60 per cent of all freight shipped in the country; and it thus recognized that the rails "must necessarily be relied upon more than all the other transportation agencies combined to place the necessary supplies of goods at seaports for export abroad to meet the requirements of a foreign aid program." In another place the report found no indication that the "recent growth in the number of motor trucks" would help much. "The cost per ton-mile of operating motor trucks," it added, "is high; they are adaptable to hauling a restricted number and kind of commodities and they cannot serve larger seaport terminals as efficiently as the railroads."

Getting back to the report's discussion of the freight-car situation, there was found a statement that the car shortage is "serious" as to the handling of the three major bulk commodities in the export program, i.e., box cars for grain, gondolas and hoppers for coal, and tank cars for petroleum. Figures are given which show that the rate of retirement of freight cars has "far exceeded" the rate of installations since 1945.

It was also noted that this year's monthly production of new cars has fallen "far short" of the 10,000-car goal. "Largely because of inability to secure steel plate," the report went on, "there is little possibility that the goal . . . will be achieved this year." At the same time, the figures also showed that "box, hopper and gondola cars, for which the need is very great, accounted for 87 per cent of the new installations (a total of 31,390 cars) in the first eight months of 1947."

With respect to the grain movement, it was conceded that, "in spite of the box car shortage, inconveniences and delays," the railroads, "by improved car handling," are now moving grain from farms to markets "more rapidly than in 1946." Also mentioned was the expectation of the Car Service Division, Association of American Railroads, that this year's "entire crop" would be transported "without serious interruptions."

The report anticipated that the "critical period in the coal car shortage" would be reached this month when it expected production to be affected by lack of cars; but it "appears" that rail movements of coal in 1948 "will not suffer serious interruptions"—if, during that year, the new installations of hoppers and gondolas reach present goals, and "if there is no large diversion of those cars to shipping other freight."

(Continued on page 62)

## Railroads File Reply in Reparation Cases

Say awards government seeks would threaten solvency; two more complaints

The Department of Justice has filed with the Interstate Commerce Commission two more complaints in which it assails railroad freight rates charged on government shipments of war materials during the period from January 1, 1942, to July 1, 1946. The commission also has received from the railroads a brief asking it to deny a D. of J. motion to vacate and set aside a Division 4 order consolidating for hearing purposes five of the complaints filed by the government; and asserting that, contrary to D. of J. claims, government wartime freight shipments moved to a "substantial extent" upon rates "far lower" than those accorded the general public. Award of the reparations sought, the carriers said, would "destroy the solvency of a large majority of the railroads."

One of the latest complaints filed by the government seeks reparations on the basis of allegations that rates on shipments of tents and tarpaulins, which had ratings of 70 and 55 per cent of the first class, minimum of 24,000 lbs., were unreasonable to the extent that they exceeded 35 per cent of first class with a 40,000-lb. minimum, while the other complaint asserts that rates on wholly or relatively inert explosives and ammunition were unreasonable to the extent that they were in excess of 30 and 32½ per cent of the contemporaneous first-class rate, adjusted to a carload minimum of 70,000 lbs.

With respect to the latter complaint, the government alleged that the magnitude of explosive shipments and the successful safety measures placed in effect by the armed forces justified rates "much lower" than those imposed by the railroads. At the same time, it observed that the types and transportation characteristics of the ammunition and explosives covered by the complaint differ from those involved in a previous complaint which pertained to the rates charged for the transportation of "hot" explosives.

Commenting on the complaint, Attorney General Tom C. Clark said that "our investigation indicates that explosives and ammunition traffic was the most profitable ever enjoyed by the railroads." "The armed forces have requested that the reasonableness of such war-time charges on ammunition and explosives be tested," he added. "All unjust and unreasonable profits should be recovered for the people."

With respect to the complaint involving tent and tarpaulin rates, J. F. Sonnett, assistant attorney general in charge of the D. of J.'s Anti-Trust Division, said that the division's investigation "indicates that the rates and charges assessed . . . appear excessive and that, in view of the heavy loading and other favorable transportation characteristics of these commodities, the government was entitled to rates much lower than those imposed by the railroads."

According to the railroads' brief, the D.



of J.'s reparation claims are estimated at approximately \$3,000,000,000, which, the railroads said, compares to their net income during the five war years, 1941-1945 inclusive, of \$3,392,000,000. The brief also noted that hearings before congressional committees had produced evidence indicating that the government saved upwards of \$500,000,000 through the medium of reduced rail rates which were "requested and granted," under Section 22 of the Interstate Commerce Act.

The carriers told the commission that land grant deductions on government traffic during the war years are estimated by government authorities to have amounted to approximately \$800,000,000. At the same time, they observed that the government, through its heavy wartime taxation rates, already has received up to 85.5 per cent of the railroads' taxable income. "During the five years, 1941-1945, the railroads earned a net railway operating income of only 4.97 per cent on their net investment, which return in 1946 decreased to 2.75 per cent," the brief continued. "Their increased cost of operation, coupled with heavy income

and excess profits taxes, not only prevented any such excessive earnings as the petitioners have contended but actually operated to deny the carriers a fair return notwithstanding an unprecedented volume of business."

The railroads asserted further that "no invention of pleading can obscure the fundamental fact that the multiple complaints filed by the government seek reparation on different theories in different complaints on the very same shipments." Contending that the handling of the complaints necessitates the "presentation and consideration" of identical factual evidence and also involves the disposition of "important questions of law," the carriers stated that the series of cases "constitutes an effort to repudiate the agreements by which special rates were obtained from the carriers, through a committee which was set up at the request of the government, and the functioning of which was formally approved by the Department of Justice."

The railroads also said that the importance of the cases, from a public standpoint, cannot be overestimated. They held that

the effort of the petitioners to isolate and try the cases in piecemeal fashion and to have the commission pass "blindly" on each, separate and detached from all others, is an effort to "conceal the real nature" of the cases and their "true effect" on the public welfare.

"Whatever may be the Department of Justice's conception, or misconception, of its obligation to further the national transportation policy, the commission is charged by Congress with the primary responsibility for the maintenance of an adequate transportation system," the brief stated in part. "The Department of Justice, although charged generally with the enforcement of national laws and policies, apparently conceives that it has no responsibility for safeguarding the nation's transportation system and can ignore the threat of wholesale bankruptcy that would face the carriers as the result of the successful prosecution of this series of complaints. Counsel for the government seems to suggest that the commission can share the irresponsibility of the Department of Justice in this regard by the simple expedient of considering the



### Turkey Accepts the First of 88 Locomotives on Order

At ceremonies in Wilkes-Barre, Pa., on October 16, Benjamin S. Dowd, president of the Vulcan Iron Works, officially delivered the first of an order of 88 205-ton steam locomotives (with tenders) to the Turkish government. The Hon. Fuat Zincirkiran, director general of the Turkish State Railways, accepted the locomotive, the first Turkey has ever bought in the United States, which was completed 60 days ahead of schedule. Present at the ceremonies also were representatives of the State department, the Export-Import Bank and several foreign governments.

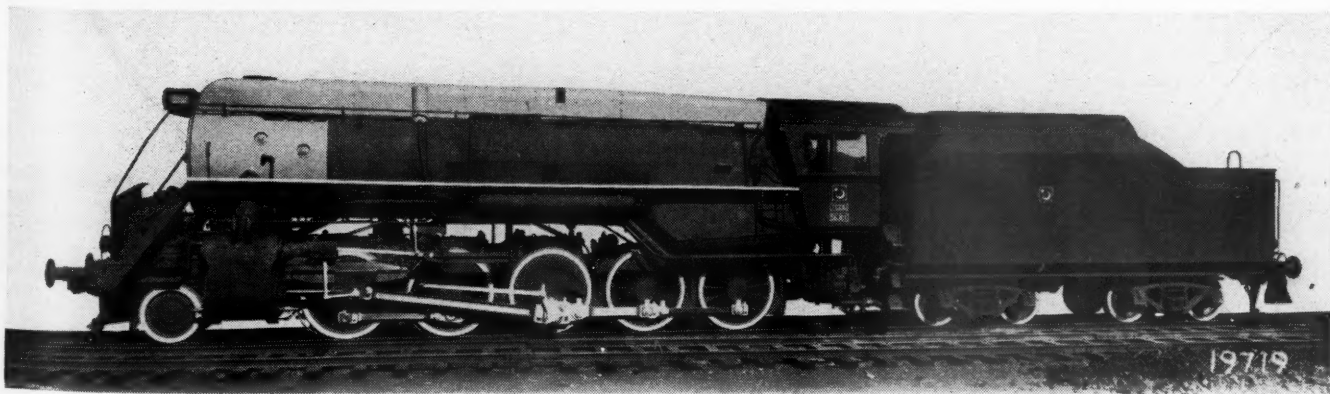
The locomotive contract, originally for 62 units for both passenger and freight service, was financed through the facilities of the Export-Import Bank of Washington. Deliveries will continue until completed next summer.

The 2-10-0 locomotive weighs approximately 244,600 lb. It has a cylindrical type boiler with a copper firebox and 57.8 sq. ft. of grate area. The total heating surface is 2,645 sq. ft. and the superheating surface 875 sq. ft. With a boiler working pressure of 250 lb. per sq. in., the locomotive develops a tractive force of 58,300 lb. The tender, which weighs 166,700 lb., has a water capacity of 8,000 gal. and will carry 28,000 lb. of fuel.

In turning over the locomotive Mr. Dowd pointed out that Vulcan's contract with Turkey is more than \$10,000,000, an amount greater than the total volume of American exports to Turkey in 1939 and only \$4,000,000 less than the record Turkish imports from this country in 1947.

Vulcan on that day also dedicated its new locomotive shop (to be known as the Edward J. O'Brien shop), which is 400 ft. long, 52 ft. wide and is of modern steel, concrete and glass construction.

Left—Fuat Zincirkiran, head of the Turkish State Railways, (left) and Benjamin S. Dowd, president of Vulcan Iron Works. Below—The locomotive which officially was delivered to the Turkish government during ceremonies at Wilkes-Barre



carriers' need for revenue to maintain an adequate transportation system only when the commission is considering rates to be effective in the future."

Charging that the complainant is seeking to defeat a consolidation of the cases because it does not want the commission to know the "tremendous revenue effect" of what is sought, the railroads said that the D. of J. is requesting, in effect, the commission to draw a "blank draft" on the carriers' revenues.

The railroads said that the D. of J., in order to promote and finance the "venture in which they are engaged," did not hesitate to advise Congress that they would seek to recover amounts aggregating as much as \$2,000,000,000 and interest thereon "going back as far as 6 years." "But," the railroads continued, "once that purpose was served, every possible step is now being taken by them to minimize and obscure the revenue aspects of this broad attack on the wartime rate level. To accomplish this, the motion goes to the extreme of insisting that each of these interdependent and overlapping complaints be heard separately so that the commission may not know officially the relation of one to another, or the effect of all."

### Gurley Takes Air-Freight Plea to Truman's Air Commission

F. G. Gurley, president of the Atchison, Topeka & Santa Fe, which, in turn, controls the Santa Fe Skyway, Inc., a non-certificated air freight carrier, this week recommended enactment of legislation to remove the present bar against the granting of air-carrier certificates to surface carriers and place surface carriers on an equal footing with other applicants before the Civil Aeronautics Board. Mr. Gurley made his views known in a statement delivered at Washington, D. C., before the so-called Air Policy Commission, set up by President Truman to investigate all aspects of civilian and military air transportation and to submit to the White House its recommendations with respect to an integrated air policy.

According to Mr. Gurley, passage of H. R. 3317, introduced in the House last May, would meet the surface carriers' objectives in that it would add a proviso to Section 401 of the Civil Aeronautics Act which would make it clear that the C. A. B. is to treat each application for a new certificate on its merits and not to apply any "special or discriminatory" standards or burden of proof merely because the applicant is a surface carrier. "The . . . bill," he continued, "also would amend Section 408(b) . . . by striking therefrom the special restrictions against acquisitions by surface carriers but leaving such acquisitions still subject to the general anti-monopoly provisions contained in that section."

Mr. Gurley's remarks were centered around the activities of the Santa Fe Skyway, which, he said, since it commenced operations in August, 1946, has "provided air freight planes which are second to none; has set up an efficient operating organization manned by veteran airmen; has flown 1,600,000 plane miles with a perfect

safety record; and has the enthusiastic support of the relatively few customers it has been permitted to serve as a contract carrier."

In this connection, Mr. Gurley said that further development of the Skyway is prevented by the absence of a common carrier certificate or of "interim common carrier rights," which, he added, have been granted to other non-certificated air freight carriers under the C. A. B.'s Economic Regulation No. 292.5. "Santa Fe Skyway was the first air freight carrier to apply for interim rights under this new regulation . . . but the board has taken no action on the . . . petition although other non-certificated air freight carriers have been operating for several months under the exemption," he charged. The application was noted in the *Railway Age* of May 24, page 1092.

Mr. Gurley told the A. P. C. that the C. A. B. has adopted a policy which, in its practical effect, excludes surface carriers from any substantial participation in common carrier air transport. At the same time, he asserted that one of the factors which has retarded the development of air freight service has been the failure of the airlines to establish the extensive ground organization and facilities necessary for the handling of air freight traffic.

"A railroad, such as the Santa Fe, has thousands of employees who are thoroughly experienced in this phase of transportation," he said. "If permitted to operate as a common carrier by air, the Santa Fe could coordinate its air service with its 8,900 route miles of truck service and 13,000 miles of railroad extending from the Great Lakes through the Southwest to the Gulf of Mexico and the Pacific Coast. Through this coordination it would be in a position to provide door-to-door air freight service in its territory, not only serving the larger cities but also extending the benefits of air speed to many additional points. . . ."

Mr. Gurley contended that proposed arrangements for voluntary coordination between the certificated airlines and surface carriers cannot provide the intensive development and close coordination necessary to extend the benefits of air freight service to the smaller communities. On the other hand, he asserted that if a railroad, such as the Santa Fe, were permitted to engage in air transport, it could provide both improved and economical service.

Noting that only a "limited number" of railroads are interested in air transport, Mr. Gurley said the assumption that surface carriers must be barred from air transport to prevent their dominating the field and absorbing the existing air carriers is refuted by the record of railroad operations in the motor carrier field.

"Many railroads," he stated, "have been operating extensive networks of bus and truck services during the past several years but they have neither dominated the field nor driven their competitors out of business. On the contrary, the record of the motor carrier industry has been one of steady growth and expansion. This was true before the industry was subject to any regulation by the Interstate Commerce Commission and it has been true

in the period since the passage of the Motor Carrier Act of 1935."

### Northeastern Truckers Allowed to Keep 1946 Rate Hike

Motor carriers operating between points in New England and between points in eastern and southeastern New York and northeastern New Jersey, on the one hand, and points in New England, on the other, may continue the 10 per cent rate increase which they placed in effect on April 15, 1946. Division 2 of the Interstate Commerce Commission has found the advance "just and reasonable."

The division's report of October 13 is in No. MC-C-527, the proceeding which the commission instituted on April 12, 1946, to investigate the increase while at the same time permitting the tariffs establishing it to become effective without suspension. The order accompanying the report discontinued the investigation proceeding.

### R.R. Freight Car Need Placed at 300,000 in Next 5 Years

American railroads will need at least 60,000 new freight cars a year for the next five years to carry out their intention of giving faster and more efficient transportation than ever before, Cleve H. Pomeroy, president of the National Malleable & Steel Castings Co., said in Philadelphia, Pa., on October 16, at the conclusion of a three week tour of the East and Midwest in which he and his associates interviewed more than 300 executives representing 25 railroads and various car operating, car building and supply companies. Substantially higher rates are urgently needed to accomplish the program and to meet increased labor costs, Mr. Pomeroy said, adding that the recent ten per cent boost in freight rates is considered only a temporary expedient until adequate increases can be determined and obtained. The amount of the increases, he continued, will be quickly recovered by the shippers in the form of better service and other economies.

Rail executives are confident of the roads' ability to improve their service if they are allowed to fulfill their plans to replace obsolete equipment and motive power, Mr. Pomeroy said. The railroad supply industry, with improved plant facilities and new designs of railway specialties, stands ready to help the program with modernized car equipment permitting higher-speed, lighter-weight cars making for more revenue tonnage, and the industry can provide the necessary volume of specialties for any program now contemplated, he added.

### Oppose Port Authority's Plan to Lease Newark Properties

Opposition to the proposed lease by the Port of New York Authority of the Newark Airport and Marine Terminal was expressed by the Lehigh Valley and the Pennsylvania jointly through their special counsel, John J. Clancy, at a hearing on October 15 before the Mayor and Board of Commissioners in City Hall, Newark,



N. J. Explaining that the two railroads are primarily opposed to that part of the plan involving the Marine Terminal rather than the Airport, Mr. Clancy laid particular stress on the economic aspects of the Port Authority's offer and the unfair competition which it would provide to privately-owned industrial sites. "All industry attracted to the Airport and Marine Terminal competes unfairly with industry outside that area, since it pays no real estate taxes," he said. Acceptance by Newark of the Port Authority's plan, Mr. Clancy added, would decrease industrial property values adjacent to the Airport; would discourage the attraction of new industries to Newark; and would cause an inevitable rise in local real estate taxes. Terming the proposal "a grave mistake," he predicted that "it could do nothing but harm the City, the taxpayers and the railroads which serve them."

### September Operating Revenues 8.6 Per Cent Above 1946

From preliminary reports of 82 Class I railroads representing 81.4 per cent of total operating revenues, the Association of American Railroads has estimated that the September gross amounted to \$583,748,954, an increase of 8.6 per cent above the \$537,556,857 reported for the same 1946 month. Estimated September freight revenues were \$474,395,737, compared with \$418,674,385, an increase of 13.3 per cent, while estimated passenger revenues were \$65,926,479, compared with \$78,468,500, a decrease of 16 per cent. The estimate for other revenues totaled \$43,426,738, compared with \$40,413,972, an increase of 7.5 per cent.

### Need Militant Public Opinion, Faricy Says

(Continued from page 55)

counsel, were re-elected. The resignation, as of November 8, of J. P. Nye, secretary-treasurer, was announced. No successor to Mr. Nye was chosen. W. H. Bunney, a director of the Association and president and general manager of the Montana, Wyoming & Southern, was elected regional vice-president for the Pacific region to succeed W. J. Gamble. The only new director elected was H. W. Hamilton, vice-president and general manager of the Manufacturers' Junction, who was elected a member of the board of directors for the Western region, to succeed H. A. Benjamin. All other regional vice-presidents and directors were re-elected. F. C. Squire, member, Railroad Retirement Board, in an address to the meeting on October 21, said that it is taking time for many railroad employees to become acquainted with the requirements of the new sickness program, which became effective last July 1. "A pretty clear example of this," he said, "is the fact that a great many sickness applications are being filed so late that the claimants are losing payments for some of the early days of their illnesses. In order to have the first day counted, the law requires an employee must file the application, part of which is the doctor's statement, within ten days. For this reason, the

board urges claimants to mail their applications not later than the seventh day. While most of the late applications are due to delay by the applicant or his representative, many employees have lost benefits because the doctor failed to complete the medical statement promptly."

Mr. Squire said that in spite of the new sickness and maternity benefits, the unemployment insurance account is still growing rapidly and is now approximately \$900,000,000. "The account is so large," he added, "that not only could the 3 per cent tax under the Unemployment Insurance Act be reduced but it could be eliminated entirely and we could still continue to pay benefits for ten years, including high amounts during a depression. Without a depression, we could go on for several more years beyond the ten years, just on the money we have already accumulated."

The passage of the amendments to the Unemployment Insurance Act, a little over a year ago, made a heavy increase in the board's work, Mr. Squire concluded. It was necessary, for example, he said, to re-examine about 300,000 claims which had already been disposed of under the old law. "In addition, we have been receiving retirement and survivor claims at a faster rate than at any time since immediately after the 1937 Act was passed. As a matter of fact, we are receiving about 5,000 claims per month at the present time, not including the unemployment and sickness claims. The processing of all these claims is started within 48 hours of their arrival at the board."

### "Oscars of Industry" Awarded to Katy

Donald V. Fraser, president of the Missouri-Kansas-Texas, in accepting the "Financial World" gold "Oscar of Industry" for what was adjudged to be the best stockholders' annual report published by any American industry for 1946, said in New York on October 10 that "this is a real tribute to our railroad and we are proud that our annual report has received this recognition." As noted in last week's

*Railway Age*, page 75, the award was made after the judges had reviewed over 3,500 annual reports of domestic corporations. Last year, Robert R. Young received the same top award for the Chesapeake & Ohio, thus making it two years in succession that a railroad has won the grand prize.

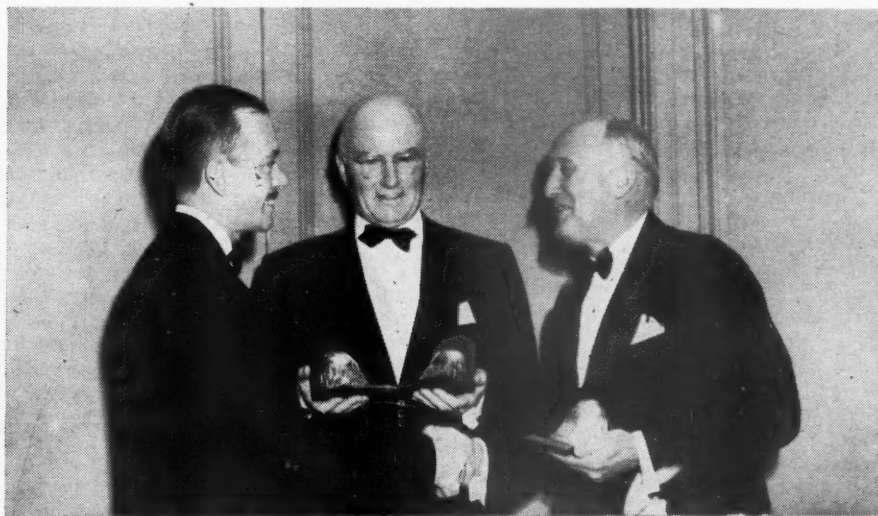
The Katy, in addition, was awarded a silver "Oscar" for the best report of any transportation industry in the nation and a bronze "Oscar" for the best report of any southeastern railroad. Other first place railroad winners for the best reports in their respective divisions were the Canadian National for Canadian railroads, the C. & O. for Eastern railroads, and the Chicago, Milwaukee, St. Paul & Pacific for northwestern railroads. The Pettibone Mulliken Corporation received an "Oscar" for the best report in the railroad equipment field.

### Equipment on Order

Railroads and private car lines had 116,546 new freight cars on order on October 1, as compared with 114,230 on September 1, according to the Association of American Railroads. Of the former total, Class I roads and railroad-owned private-controlled refrigerator companies had 104,451 new freight cars on order, compared with 105,261 on September 1 and 61,419 on October 1, 1946.

Cars on order by Class I roads and railroad-owned private-controlled refrigerator companies on October 1 included 41,718 hopper cars, of which 3,161 were covered hoppers, 9,088 gondolas, 840 flat, 7,056 refrigerator, 450 stock, 133 miscellaneous freight cars and 45,166 box cars, including 42,064 plain and ventilated and 3,102 automobile box cars. Of the total number of new freight cars which Class I railroads had on order on October 1, 24,229 will be built in railroad shops and 80,222 in outside shops.

The Class I roads also had 841 locomotives on order on October 1, compared with 555 on the same day in 1946. The former total included 46 steam, four elec-



Donald V. Fraser (center) and R. J. Morfa (right) president and chairman, respectively, of the Missouri-Kansas-Texas, accepting the "Oscars of Industry" from Weston Smith, vice-president of Financial World. The awards were made at the Annual Report Awards banquet in the Grand Ballroom of the Hotel Pennsylvania, New York, on October 10

tric and 791 Diesel-electric locomotives, compared with 65 steam, six electric and 484 Diesel-electrics a year ago.

Class I roads and railroad-owned private-controlled refrigerator car companies installed 38,572 new freight cars in service in the first nine months of 1947, compared with 30,625 in the same 1946 period. In September, the railroads installed 7,182 new freight cars, the largest number for any month since April, 1942, when 10,478 were built. New freight cars installed in the 1947 nine-months' period included 10,616 hopper cars, of which 1,246 were covered hoppers; 2,529 gondolas, 3,945 refrigerator, 921 flat, 500 stock, 351 miscellaneous freight cars and 19,710 box cars, including 17,122 plain and ventilated and 2,588 automobile box cars.

The Class I roads also put 595 new locomotives in service in the first nine months of 1947, of which 67 were steam, two electric and 526 Diesel-electric. New locomotives installed in the same period last year totaled 383, of which 77 were steam and 306 Diesel-electric.

The Class I roads and railroad-owned private-controlled refrigerator companies have retired 48,357 freight cars in 1947, of which number 6,514 were retired in September. In the comparable 1946 period, 45,229 cars were retired.

## Supreme Court O.K.'s Rock Island Revamp

(Continued from page 55)

situation as it affects the condition of the debtor"; and that "should certiorari be granted and the plan eventually remanded to the commission, the commission is prepared to give full hearing on the facts and a report thereon as may be warranted."

On October 16, Representative Walter, Democrat of Pennsylvania, addressed to Chairman Aitchison a letter in which the congressman said he was "amazed and astounded" when he read newspaper reports about the "unprecedented and impertinent" letter that the commission had sent to Chief Justice Vinson. Mr. Walter is an opponent of pending legislation, of which Senator Reed is a sponsor, to set up procedures for voluntary readjustment of railroad financial structures, including provisions making such procedures applicable to certain roads already undergoing reorganization as well as to roads not yet in the hands of the courts.

Among others, Mr. Walter asked Chairman Aitchison these questions: "Why, knowing full well the desperate fight Senator Reed and Representative Reed [Republican of Illinois] are making to keep their legislation alive for possible passage in the next session of Congress, the commission apparently played into the hands of both by writing such a letter to the Supreme Court of the United States? What pressure was brought to bear on the commission by Senator Reed with his threatened investigation, and how far-reaching was this threat in bringing about the sudden reversal of the commission's stand?"

At last week's press conference, Senator Reed listed the Aitchison letter as one of the reasons why he postponed the hearings

which he had planned to hold. Also, he hailed the letter as one revealing a "commendable and significant change" in commission policy in reorganization cases. It had, the senator added, removed "the principal urgency for immediate committee hearings."

The Supreme Court's order refusing to review the circuit court ruling was entered by a 7-to-2 vote. The brief announcement said that the dissenters were Justices Frankfurter and Jackson who joined in this expression: "Inasmuch as the Interstate Commerce Commission has deemed itself not free to file a memorandum of its views except on invitation of the court, we believe, in view of all the circumstances, that final action on this petition should not be taken without asking the commission to make a definite statement of its present position."

Justice Rutledge's concurring expression revealed that he, too, would have preferred to have had the court invite the commission to submit a brief, such preference being based on the justice's feeling that the court should proceed with an "excess of caution," rather than "for any regard for the merit of the commission's vague and general suggestion."

Meanwhile, the Rutledge opinion had set out briefly developments which brought the appeals before the court. It recalled that the district court on July 15, 1945, approved the reorganization plan as submitted to it by the commission; and that approval was affirmed by the circuit court. While the case was pending in the circuit court, the district court directed the commission to submit the plan to 11 classes of creditors for acceptance or rejection. On February 26, 1946, the commission certified that 9 classes had accepted the plan while 2 classes rejected it.

Objections to final confirmation of the plan were filed in the district court by some members of the dissenting groups; and the district court notwithstanding its prior approval, then found the plan inadequate to afford the dissenters "equitable treatment." It thus ruled that the rejection by the dissenting group was "reasonably justified," and referred the plan back to the commission. That is the district court order which was reversed by the circuit court ruling now upheld by the Supreme Court.

It was clear to Justice Rutledge that the rule laid down by the Supreme Court, in upholding the commission-approved plan in the *Rio Grande* case, applied to the present proceeding. He thought, however, that the "unusual circumstances" by which the present case was "embarrassed" called for an explanation of his reasons for concurring in the majority action. He identified the "unusual circumstance" as the Aitchison letter, adding that the effect which should be given to that communication seemed to him "perhaps" the "most important" question in connection with the disposition of the case.

"The reasons for transmitting the letter at this late stage in the proceedings," Justice Rutledge went on, "may be a matter of some conjecture, in view of the fact that, as we have been informed, on October 1, 1947, the commission expressly refused to grant the request of an attorney that it file

a brief *amicus curiae* in this case indicating its views on the petition for certiorari, and ask that the case be referred back to it for reconsideration, investigation and possible revision of the plan."

Turning then to the question of whether the commission's communication furnished sufficient cause for changing the disposition of the case on the record presented, the justice reached a negative answer. His reasoning was, in part, as follows:

"Guardedly phrased, the letter's only positive assertion bearing upon the merits of our disposition is the statement: 'since the plan was sent to the district court by the commission, there have been material changes in the situation as it affects the condition of the debtor.' The commission, however, 'does not attempt to appraise the effect of these changes so far as they may affect the provisions of the plan, which we understand are developed at length in the record of the courts.'"

"The commission does not suggest that it has examined the record in this cause . . . ; that in the light of that record changes have occurred since its approval of the plan in May, 1944, of a character unlike the changes in the *Rio Grande* cases, not 'envisioned and considered' by it in its deliberation upon or explanation of the plan. Nor does it ask this court either to be permitted to file a brief here or to be heard upon argument in the event of certiorari is granted. There is, indeed, no suggestion that certiorari should be granted, but only one that if that should be done and the plan eventually remanded to the commission, it is 'prepared to give full hearing on the facts and a report thereon as may be warranted.'"

"The letter comes down, therefore, to a statement that there have been material changes in the debtor's condition since the commission's approval was given, and to the statement that, if the court finally should remand the case to it, the commission is prepared to do its duty by affording a further full hearing and rendering a further report. In addition the possible but by no means certain inference might be drawn that the commission may desire another opportunity to consider the plan before it goes to confirmation."

"The tenuous character of the commission's suggestion makes it a matter highly embarrassing for the discharge of our function. . . . If the commission had knowledge of facts . . . which in its opinion would disclose or probably would disclose changed circumstances since its approval of the plan . . . it would seem that some representation to that effect would or should have been made with some supporting factual discussion and conclusions concerning the alleged changes for our assistance. In view of the length of time the application for certiorari has been pending here, it seems hardly likely that such knowledge could have come to the commission too late for its presentation for our consideration in the regular course of the disposition of the petitions for certiorari. And, if the contrary was the fact, then a request for time in which to submit a brief upon the merits of the application for certiorari hardly could have been less appropriate or helpful than the suggestion which has been made."



"But the commission has not tendered its aid in the disposition of the court's problem. . . . Nor, in my opinion is the suggestion which the commission's letter makes sufficient basis for causing the court to dispose of those petitions otherwise than would be done in the absence of that suggestion. At the very greatest the suggestion would merit an invitation by this court for the commission to submit a brief. . . . Indeed, out of an excess of caution rather than for any regard for the merit of the commission's vague and general suggestion as made, that is the course my own preference would follow. Since, however, that course is not to be pursued, I do not find in the mere general suggestion that 'there have been material changes in the situation as it affects the condition of the debtor' a sufficient basis for altering the conclusion I have reached on the basis presented by the parties in the record, namely, that none of the admitted and substantial changes is of a character which, within the rulings of the *Rio Grande* cases, would require reopening of this fourteen-year-old reorganization and starting down the long road to consummation again. . . ."

After the court's decision was announced, Senator Hawkes said that it showed he was right when he declared in his earlier statement that he had "great respect for the high dignity and integrity of our Supreme Court." The senator added:

"I fully realize there are always injustices in bankruptcy proceedings. But the great objective in reorganization should be what is the greatest good for the greatest number and for continuance of private ownership of railroads."

"I have always felt that we must not figure the railroad situation created by excess war tonnage should be the gauge of reorganization. I am deeply interested in keeping the railroads privately owned and feel that the way they are reorganized in the post-war era may determine whether they will be government-owned in the future or continue in the hands of private operators."

Senator Reed was absent from Washington when the court's action was announced.

### Strike Called in Canada

A strike affecting some 125,000 employees of Canadian railroads has been called effective November 3 at 8 a. m., F. H. Hall, chairman of the negotiating committee of 17 associated railway unions, announced in Montreal this week.

Railways involved are the Canadian National, the Canadian Pacific, and their subsidiaries, and the Pacific Great Eastern, Algoma Central; Toronto, Hamilton & Buffalo; Ontario Northland; Sydney & Louisburg, and the Essex Terminal Railway.

The strike has been called to enforce the unions' demand for 14 days' vacation with pay each year.

A government-appointed conciliation board several weeks ago recommended vacations with pay on a sliding scale—six days for employees with one year's service, and two days after three years' service, and two days after five years' service.

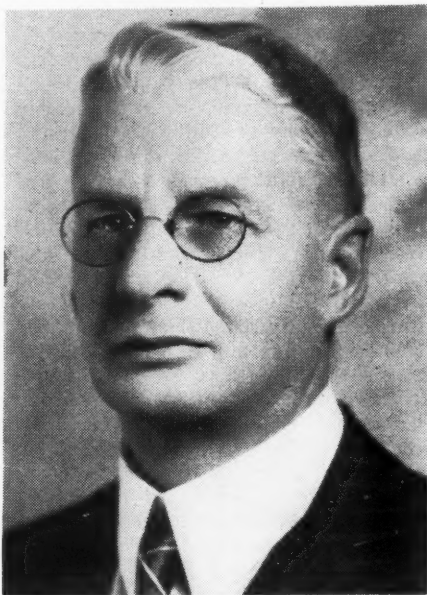
Hall said the board's decision was accepted by the unions but declined by the

railways, following which the unions had reverted to their original demands of 14 days.

### H. O. Hill Is New President of American Welding Society

The American Welding Society has elected Harold O. Hill as its president for the year 1947-48. Mr. Hill assumed that office on October 24 at the conclusion of the 1947 annual meeting at the Hotel Sherman, Chicago.

Mr. Hill is assistant chief engineer, fabricated steel construction, of the Bethlehem Steel Company, Bethlehem, Pa. Born in Ontario, Canada, he was educated at the University of Toronto, from which he received the degree of B.A. Sc. in Mechanical Engineering.



H. O. Hill

He commenced his engineering career with the Riter-Conley Company of Pittsburgh, Pa., fabricators of plate and structural steel. Here he served in many capacities and was chief engineer when this company was merged into McClintic-Marshall Company in 1916, when he became assistant chief engineer of the enlarged company in charge of the engineering on tank and plate work. When the McClintic-Marshall Company was merged with the Bethlehem Steel Company in 1931 he continued his same duties with Bethlehem.

Mr. Hill has held many offices in the society and has been on numerous important committees during the 16 years he has been a member. He is also a member of several other technical professional societies.

### Interim Phase of Mail Pay Case to be Argued October 27

The Interstate Commerce Commission was scheduled to hear oral argument October 27 on a motion filed by the railroads last July for an interim increase of 35 per cent in rates for handling United States mail. The interim increase, if granted in full, would be 10 per cent less than

the permanent upward adjustment sought in the original petition filed by the railroads on February 19. The carriers seek to make the temporary hike retroactive to the latter date.

The commission, meanwhile, has received briefs filed by the Post Office Department, the National Publishers Association, Inc., and the National Council on Business Mails, Inc., all of whom oppose any increase. The petitioning carriers have also filed a brief.

According to the latter, it is essential to the maintenance of an efficient transportation system adequate to meet the needs of the nation's commerce, postal service and national defense that there be an immediate increase in the compensation received by the railroads for transporting mail.

"Mail service is the only important segment of petitioners' traffic upon which no increase in compensation has been granted in the past 12 months or the decade immediately preceding," the railroads said, adding that each form of traffic should pay its own way. "The rates of compensation to Class I railroads for mail service presently in effect were fixed by the commission as of May 9, 1925, and thus have remained static for more than 22 years. Costs of labor, materials, supplies and taxes have increased to such an alarming extent that the need of the railroads for immediately increased compensation is self-evident. . . ."

Contending that the commission should exercise its authority to grant retroactive interim relief, subject to modification by a final order, the railroads told the regulatory body that, among other things (1) their urgent revenue necessities require immediate relief; (2) their cost study fully justifies the relief sought; and (3) further postponement of the relief sought will cause them irreparable injury.

The Post Office Department, on the other hand, told the commission that its approval of interim relief for the railroads would be unlawful because (1) the record to date does not permit the motion of the railroads to be granted; (2) under the Railway Mail Pay Act, the commission has no authority to enter an order of interim relief, because proceedings substantially similar to the "prior general cases" have not been held and to grant interim relief would in itself be substantial deviation from prior procedure; and (3) the commission is not authorized to enter an order establishing increased rates until the hearing contemplated by the Railway Mail Pay Act has been concluded.

The department further asserted that there has been no showing by the railroads of emergency conditions required to justify the emergency relief sought. It contended that the issues of the Docket No. 9200 proceeding go beyond the matter of the rates of railway mail pay. "There are, for example," it said, "questions of classification of railroads for rate-making purposes, the fixing of different rates for the return of empty mail cars and the changes in the space rules affecting mail pay rates."

The N. P. A. and the National Council on Business Mails charged that (1) the commission is without authority to grant

any increase until it has fully considered all the facts; (2) neither the present circumstances of the railroads nor the benefits to be derived by them in any way justify the unusual unprecedented action the carriers are urging the commission to take; (3) rates of compensation for the transportation of first class mail should be distinguished from second, third and four class mail; and (4) an interim increase would be notice to Congress to take immediate action, without waiting the completion of the proceedings and the commission's final order, to increase postage rates to cover increases in the costs of handling mail.

### Strike Threat on New Haven

The Brotherhood of Railroad Trainmen is conducting a strike vote on the New Haven and, in conformity with usual practice in such cases, is announcing that its members are voting "overwhelmingly" in the affirmative. The dispute involves the interpretation of working rules which the railroad is willing to submit for adjudication to the National Railroad Adjustment Board but upon which the B. of R. T. has taken a "do-it-our-way-or-else stand." The trainmen's organization has not, however, indicated that it will strike if an "emergency board" is named.

### Strike on Bingham & Garfield

Bingham & Garfield employees represented by the Brotherhood of Locomotive Firemen & Enginemen and Order of Railway Conductors went on strike at 12:01 a.m., October 22 as a result of further controversy over matters considered by an emergency board which submitted its report to President Truman last July (see *Railway Age* of August 2, page 55).

The road, owned by the Kennecott Copper Corporation, has served mines of that company at Bingham, Utah; and the dispute involves the unions' demands for guarantees to employees who may be affected by a plan to construct a plant-facility line to replace the B. & G., which is a common carrier. It is understood that the strike resulted from a controversy over that phase of the employee-protection proposals which involves retirement arrangements. The emergency board recommended that the parties negotiate a contract to provide generally that employees affected by the change to plant-facility operation would be in no worse position with respect to rates of pay, retirement and unemployment benefits, and seniority.

### Seans Readiness for Foreign Relief

(Continued from page 56)

Next came the suggestion that controls designed to maximize freight-car utilization be continued. There also was a brief reference to motive power which was found "in fair condition, very much better than freight cars."

"The railroad industry should explore carefully the possibility of achieving significant increases in its traffic handling

ability with its present equipment by modification of operating practices," the report said in closing the rail phase of its transportation discussion. It added that "speeding up of terminal and train operations, and coordination of operations more closely with those of truck and water carriers, are among the possibilities which might be examined."

Turning to the carriers on the inland and coastal waterways, the report found them "making the slowest progress towards regaining their pre-war importance in the transportation picture." The unbalanced traffic on the Mississippi was noted along with a suggestion that the "large south-bound movement of empty barges" might be utilized, "especially for coal and grain" shipments. It was conceded, however, that opportunities in that connection would be limited by "the specialized nature of the equipment, the inability to coordinate the sailing dates of upbound with downbound hauls and other factors." The report then went on to assert that the "greatest handicap to the full utilization of the inland and coastal waterway facilities is not so much the lack of physical facilities as the failure to establish joint rail-water routes and freight rates which actually move traffic."

"In fact," it continued, "the railroads have placed in effect unusually low rates at practically all major ocean, river and lake ports. This was done in accordance with permission granted by the Interstate Commerce Commission to depart from the long-and-short-haul clause in the fourth section of the Interstate Commerce Act. The result is that much traffic that would normally flow by water is attracted to the railroads. The coastwise and intercoastal shipping interests have instituted a proceeding before the Interstate Commerce Commission seeking to revise the relationship between rail and water rates. If that revision is achieved and the coastwise and intercoastal tonnage moves upward to its relative pre-war level it would tend somewhat to relieve the burden on our rail transportation facilities."

As to pipe lines, attention was called to the fact this type of carrier, which is restricted to a few liquid commodities, provided "more than 13 per cent" of all 1946 freight transportation in the country. "Because of the great domestic demand for petroleum products and the shortage of tank cars, tank barges and ocean tankers, pipeline facilities are being operated at full capacity," the report added. It went on to say that additions to the pipe-line system are being made—"but not rapidly enough to meet the need for them."

The observation, noted above, that the motor carrier industry would not be of much help in serving the ports was made despite the report's other finding that the truckers had made the "speediest post-war reconversion," and, "in contrast to the railroads," are "now in a position to carry a larger volume than ever before." While the data were not available to indicate the trucks' share of the current freight movement, the report said that it "probably" exceeds the 8 per cent which they handled in 1939. "The major contribution this transport agency can make to the program," the report said later on, "is to carry more miscellaneous freight that might otherwise

move in box cars and thereby increase the box car space available for shipment of grain."

The situation as to ocean shipping was found to be such as to permit the handling of a margin of 10 to 15 per cent over the current volume of dry cargo, which is at an "all-time high." As to tankers, however, the report said that "unless steps are taken which will shorten hauls and increase the number of tankers in operation, the short supply of such vessels will prevent the shipment of sufficient petroleum to meet the world demand." Meanwhile, port facilities "have sufficient capacity to move larger quantities of general cargo, grain, oil and coal than will pass through them for export in 1947."

The outlook for the production of freight cars, locomotives and passenger cars was discussed in the "Machinery and Equipment" section of the report. The freight-car phase of that discussion presented figures on past and current production and on domestic and foreign orders. Among other comment on this data, it was asserted that "although the car builders claim facilities for production of 204,000 freight cars yearly they are still struggling, with the aid of special allocations of 159,000 tons per month of steel, to attain a rate of 120,000 a year."

The report went on to note that "over 100,000" freight cars are now on order; but it added that "new cars are not being ordered at the rate which would appear justified in view of increased retirement of worn-out cars and the normal growth in volume of traffic." Later on it had this further comment on the situation as to orders:

"When production reaches 10,000 cars a month the size of the present backlog can be steadily diminished if new orders continue to be placed at only the present rate of 100,000 a year or less (in 1946 only 57,731 cars were ordered). This discussion concerns car building rather than transportation, so it does not examine the reasons why new freight cars are not being ordered at a higher rate. Actually, on only four occasions have new car orders exceeded 100,000 cars a year; namely, 178,210 in 1922, 145,616 in 1924, 110,141 in 1929, and 106,897 in 1941. Under pressure from the Office of Defense Transportation, and after receipt of an increase in freight rates, American roads placed orders for new cars at a rate of 11,000 cars monthly for the first seven months of 1947 but this rate slumped to 2,376 cars in August."

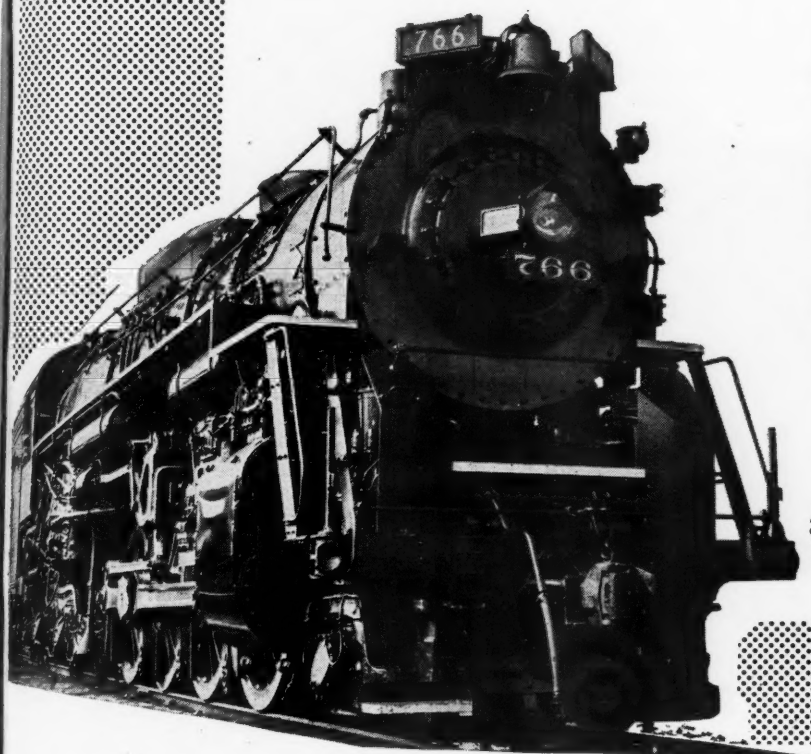
As to the foreign situation, the report said that "practically no new orders for European freight cars have been booked lately, European car builders having been said to be quoting lower prices." Also mentioned were reports to the effect that there are in Western Europe "over 200,000 freight cars out of service awaiting repairs." In that connection, the report suggested that "immediate assistance" in supplying European shops with steel for this repair work "will assist freight transportation there more rapidly and effectively than any attempt to build new cars in the United States for export to Europe, and will also economize on the total amount."

The discussion of the locomotive and passenger-car situations said that present



# HIGH AVAILABILITY

## MEANS INCREASED REVENUE



**T**HE modern steam locomotive is capable of hauling heavier payloads at higher sustained speeds. Terminal-to-terminal time can be drastically reduced. Reduced running time means increased availability . . . an increase that such progressive railroads as the Nickel Plate are capitalizing on in the operation of its freight fleet of 55 Lima-built 2-8-4's at speeds closely approximating passenger schedules.



LIMA, OHIO  
Lima Locomotive Division  
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**LIMA-HAMILTON CORPORATION**

HAMILTON, OHIO  
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annual productive capacities are estimated at 4,830 locomotives (2,300 steam, 2,000 Diesel-electric and 530 industrial), and "nearly 4,000" passenger cars. Locomotive deliveries were found to be averaging 10 months from placement of the order, while the August 1 backlog of passenger-car orders was put at 3,064 for domestic use and 127 for export. Current production of passenger cars was put at 90 per month. As to the effect on domestic transportation of increased exports of locomotives and passenger cars, the report had this to say:

"So far as manufacturing facilities are concerned some 2,250 steam locomotives could be exported yearly, without damage to domestic needs. This is because we have facilities for production of 2,300 yearly whereas the domestic demand, due to rapid Dieselization of United States railroads, has dropped to about 50 steam locomotives yearly. New production facilities for Diesel-electric locomotives bring present estimated capacity to 2,000 units yearly, whereas domestic demand for the next five years is estimated to average 850. A substantial balance for export is therefore indicated, dependent however upon availability of the electrical equipment—a factor which makes the indicated capacity more theoretical than real.

"The export demand for railroad passenger cars is comparatively small . . . An increase in export orders during the next five years would probably impede the modernization program of the domestic carriers, since the present backlog is large as compared to the ability of the industry to obtain materials and components."

### St. Francois County Fined \$250

The Interstate Commerce Commission has been advised by the federal district court at St. Louis, Mo., that a fine of \$250 was imposed upon the St. Francois County on October 10. The carrier, according to the commission, pleaded guilty to an information charging it with granting unlawful extension of credit, a violation of Section 3(2) of the Interstate Commerce Act.

### Rise in Car-Loading Charge Again Postponed

The Interstate Commerce Commission has further postponed, from October 30 until December 1, the effective date of its recent order which vacates the suspension of tariffs whereby the railroads propose to increase their charges for loading and unloading carload freight at various points in Official territory. The vacating order accompanied the commission's report in I. & S. No. 5466, which was noted in the *Railway Age* of August 30, page 58.

### Emergency Board Appointed in R.E.A. New York Case

President Truman on October 21 appointed an emergency board to investigate the dispute which resulted in the recent strike of New York employees of the Railway Express Agency who are members of the International Brotherhood of Teamsters. The appointment of the board followed the ending, on October 14, of the

strike which had been in effect since September 19.

The National Mediation Board certified the case to the President after its mediatory efforts had failed, and it was unable to persuade the parties to submit the controversy to arbitration. The dispute arose over the refusal of the union to settle on the basis of the 15½-cents-per-hour wage award granted to non-operating railroad employees and accepted by the Brotherhood of Railway Clerks and other non-op unions for those of their members who are R.E.A. employees.

As noted in the *Railway Age* of October 18, page 70, R.E.A. employees who are members of the Teamsters union in seven cities other than New York were parties to another emergency board proceeding on which the President received a report October 13. That report recommended that the 15½-cents-per-hour wage increase be extended to the employees involved, and that their demands for a more favorable adjustment be rejected.

Members of the present board, all New Yorkers, are Arthur S. Meyer, chairman of the State Board of Mediation, Frank M. Swacker, attorney, and Aaron Horvitz, labor relations consultant. The board was scheduled to convene for public hearings at New York on October 27.

### Personnel Changes on N. R. A. B.

O. E. Swan has been appointed a carrier member of Division I of the National Railway Adjustment Board, succeeding Bruce Dwinell, who has returned to his former position as general attorney of the Chicago, Rock Island & Pacific, at Chicago. Mr. Swan had previously served on the division.

### Bus Fare Hearings

The Interstate Commerce Commission has again changed the schedule of hearings in connection with its investigation of bus fares. The latest changes were made by an October 17 order in the proceeding—No. MC-C-550.

The order assigns the Dallas, Tex., hearing for January 12, 1948, instead of November 10, and the Washington, D. C., hearing for March 1, 1948, instead of January 19, 1948. It also cancels the hearing which had been scheduled for December 8 at Chicago, and assigns hearings for Kansas City, Mo., and Pittsburgh, Pa., for January 19, 1948, and January 28, 1948, respectively.

### Speed Up "Sunshine Special"

The Missouri-Pacific's northbound "Sunshine Special" from Mexico City, Mex., to St. Louis, Mo., and eastern points will arrive in the border city of Nuevo Laredo, Mex., nearly three hours earlier than heretofore, permitting customs, health and immigration officers to complete their inspections during the early hours of the evening. The Missouri Pacific announced that by arriving in Nuevo Laredo at 8:15 p.m. rather than at 11 p.m., it is anticipated that the border inspections can be completed by 10:30 p.m., thus enabling passengers to retire earlier. The "Sunshine Special" will depart from Mexico City at 4 p.m. instead of 5 p.m., but will continue

to leave Laredo, Tex., at 3:40 a.m. and to arrive at San Antonio, Tex., at 8:05 a.m.

### Alabama Intrastate Rates

The Interstate Commerce Commission has instituted an investigation into the Alabama Public Service Commission's refusal to authorize intrastate freight-rate increases in line with the intrastate adjustment approved in Ex Parte No. 162. The proceeding is docketed as No. 29845.

### Railway Editors Will Convene Aboard Coast-Bound Train

The American Railway Magazine Editors Association will celebrate its 25th anniversary this year by holding its annual convention aboard the "Exposition Flyer," while enroute to San Francisco, Cal. The meeting will open on October 31, at 12:45 p.m., as the train leaves Chicago's Union Station, and will close upon its arrival at the Oakland (Cal.) pier on November 3. Entitled a "Convention-on-Wheels," the four-day session will feature meetings held aboard the train in cars assigned to the group and attached to the "Exposition Flyer."

Highlighting the convention will be a continuous "Symposium of Magazine Methods," in which 10 editors will each read a paper pointing up a particular phase of editing. Each presentation will be followed by a question and answer period. The symposium will be monitored by Cliff Massoth, assistant editor of the Illinois Central magazine, and the following will take part: Hugh Lee Fitts, Missouri Pacific; Harold Freed, Norfolk & Western; Virginia Tanner, Baltimore & Ohio; Ted O'Meara, Chesapeake & Ohio; George W. Eastland, Chicago & North Western; William Crawford, Central of Georgia; Inez DeVille, B. & O.; Julian James, Louisville & Nashville; B. E. Young, Southern; and George Frank, Erie.

The editors will make a stop-over at Denver, Colo., where they will tour the city and have lunch as guests of the Denver & Rio Grande Western. At Salt Lake City, Utah, the group will be guests of the Utah Motor Tours. The association will make tours at San Francisco, arranged by the Western Pacific, the Southern Pacific and the Atchison, Topeka & Santa Fe.

### Chicago Roads Get 10 Per Cent Hike in Commutation Fares

Twelve railroads operating suburban service in the Chicago area were granted a temporary 10 per cent increase on commutation fares by the Illinois Commerce Commission on October 21, to become effective on November 1. The new rates are to continue in effect, pending the commission's decision on a request by the carriers for a permanent 25 per cent increase in commutation fares.

The Illinois Central estimates that the increase will raise its commutation revenues by approximately \$620,000 a year. The Chicago & North Western anticipates an additional \$300,000 and the Chicago, Burlington & Quincy expects some \$90,000 more revenue. Other railroads affected are: Chicago, Rock Island & Pacific; Gulf, Mobile & Ohio; Chicago & Western Indiana;



# MORE POWER

This curve shows a comparison of horsepower at rear of tender for a modern locomotive when equipped with piston valves and when equipped with the Franklin System of Steam Distribution. In both cases, steam consumption by the engine is 90,000 lbs. per hour.

## Computations based on:

Type 4-8-4

Cylinders 25" x 32"

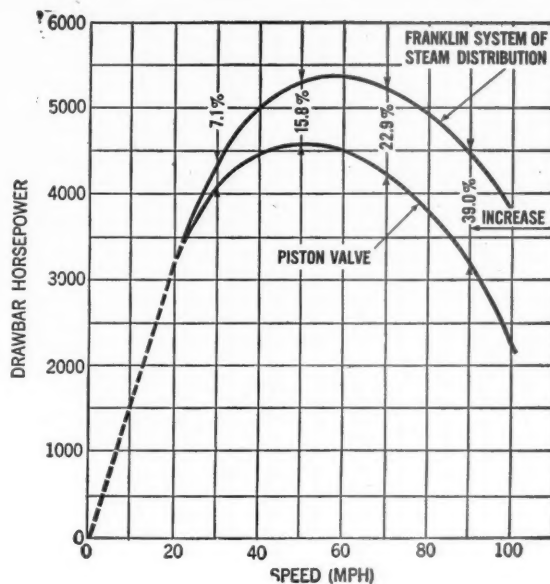
Driving Wheels 80"

Boiler Pressure 300 lb

Steam Temperature 730° F

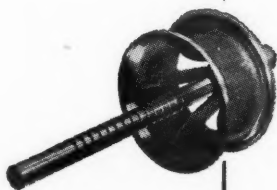
Total Heating Surface 4225 sq ft

Grate Area 100.2 sq ft



## from a locomotive equipped with the Franklin System of Steam Distribution

This curve shows the improvement in horsepower output that may be expected from a modern locomotive when it is equipped with the Franklin System of Steam Distribution.



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AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

October 25, 1947

65

Chicago, Aurora & Elgin; Chicago, Milwaukee, St. Paul & Pacific; Wabash; Chicago, North Shore & Milwaukee; Minneapolis, St. Paul & Sault Ste. Marie and the Atchison, Topeka & Santa Fe.

## Freight Car Loadings

Carloading figures for the week ended October 18 were not available when this issue went to press.

Loading of revenue freight for the week ended October 11 totaled 956,862 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loading			
For the Week Ended Saturday, October 11			
District	1947	1946	1945
Eastern .....	169,845	167,068	128,072
Allegheny .....	196,448	190,757	147,980
Pocahontas .....	73,313	69,742	29,499
Southern .....	140,279	133,065	114,469
Northwestern .....	152,853	135,989	138,641
Central Western .....	151,682	140,598	136,734
Southwestern .....	72,442	62,224	59,164
Total Western Districts .....	376,997	338,811	334,539
Total All Roads .....	956,862	899,443	754,559
Commodities:			
Grain and grain products .....	54,007	49,735	53,828
Livestock .....	23,983	23,682	25,999
Coal .....	191,142	185,266	100,434
Coke .....	15,080	14,349	7,840
Forest products .....	47,971	46,374	35,721
Ore .....	68,013	60,361	63,478
Merchandise l.c.l. .....	122,351	129,963	113,707
Miscellaneous .....	434,315	389,713	353,552
October 11 .....	956,862	899,443	754,559
October 4 .....	942,533	907,168	768,040
September 27 .....	937,954	916,515	832,509
September 20 .....	931,072	899,052	837,293
September 13 .....	922,360	907,169	856,101
Cumulative total, 41 weeks .....	35,005,985	32,224,983	33,536,698

In Canada:—Carloadings for the week ended October 11 totaled 88,131 cars as compared with 86,111 cars for the previous week and 85,172 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 11, 1947 .....	88,131	38,228
October 12, 1946 .....	85,172	35,809
Cumulative totals for Canada:		
October 11, 1947 .....	3,057,384	1,499,709
October 12, 1946 .....	2,839,604	1,400,914

## 152 Specials to Bring Visitors to Harvester Exhibition

The greatest mass movement of civilians by rail since the close of World War II is now under way, the International Harvester Company claims, in conjunction with its celebration of "Harvester's 100 Years in Chicago." Approximately 100,000 out-of-town residents will make one-day excursions to visit the exhibition, which runs from October 18 to November 2 at Soldiers Field, Chicago.

Operation of 152 special passenger trains is planned. The largest single movement took place October 21—celebrated as "Illinois Day"—when nearly 30,000 traveled to Chicago on 43 specials on 7 railroads. "Michigan Day," celebrated October 23, brought 11,000 persons to the exhibition on 18 different trains.

On October 28, "Wisconsin Day," 14,000 passengers are expected to arrive on 21 special trains, and on October 29, "Indiana Day," 29,000 Hoosiers will arrive on 44 extra trains. Every major passenger road entering Chicago is participating in the mass movement, and, while most of the special trains will originate at points in Illinois and neighboring states, some special trains will be operated from points as distant as Birmingham, Ala., Nashville, Tenn., Louisville, Ky., Kansas City, Mo., Omaha, Neb., and St. Cloud, Minn.

## Frisco Opens New Freight Depot At Birmingham October 28

A modern, \$200,000 freight station containing 25,000 sq. ft. of floor space will be opened by the St. Louis-San Francisco at Birmingham, Ala., on October 28. Clark Hungerford, Frisco president, and the city's officers will participate in the opening ceremony. The station is completely mechanized, including an overhead crane capable of handling up to three tons of freight. Located at First avenue south—one of Birmingham's principal thoroughfares—and 18th street, the new station is easily accessible to the business and industrial districts of the city.

The building consists of a freight warehouse measuring 40 ft. by 290 ft. and an office, 110 ft. by 28 ft. A 16-ft. by 340-ft. covered platform located on the north side of warehouse is served by six spur tracks. On its south side, the warehouse is set back some 40 ft. from the adjacent street, enabling large trucks to load and unload without interfering with the normal flow of traffic. Each door of the warehouse is equipped with an electric extension cord for lighting during operations at night.

## Lima-Hamilton Holds Open House for Railfans

The Lima-Hamilton Corporation played host to nearly 400 members and guests of the Chicago and Northern Indiana chapters of the Railway & Locomotive Historical Society at the Lima Works on Sunday October 19. The railroad historians traveled to Lima on a Baltimore & Ohio special train which left Chicago early Sunday morning and returned the same evening.

Decapod (2-10-0) type locomotives, complete and ready for shipment to the Republic of Poland, were spotted for inspection and photographing outside the plant, along with a Lima-built Baltimore & Ohio Santa Fe type engine and two Shay-g geared locomotives. Inside the works, the Polish locomotives were shown in various stages of production. Several types of power shovels were also on display.

## Drop Proposal as to Ex Parte 162 Increase on Milk

Because the railroads had canceled the tariffs involved, the Interstate Commerce Commission issued an October 13 order discontinuing the proceeding which it had instituted to investigate a proposal to cancel the Ex Parte 162 increase of 15 per cent on milk or cream. When the commission, in August, suspended the tariffs and instituted the now-discontinued investigation

(I. & S. No. 5515), it issued a notice saying that the proposed cancellation "would have resulted, in some instances, in the application of higher general increases."

## Correction

Two typographical errors in the article, Man Power vs. Machine Power, by Roy V. Wright, in the *Railway Age* of October 18, 1947, page 53, require correction in order to make the sense clear. In the first paragraph, line 11, the word "area" should read "era," and in the second paragraph, line 8, the word "totaled" should be "tended." Henry Hazlitt's book, "Economics in One Lesson," mentioned on page 650, is published by Harper & Brothers (1946) and not by Van Nostrand.

## Two Railroad Presidents on C. E. D. Board

The Committee for Economic Development has chosen 16 new trustees, according to an announcement by Chairman Paul G. Hoffman. The list includes Charles E. Denney, president, Northern Pacific; John W. Barriger, president, Monon; H. G. Batcheller, president, Allegheny Ludlum Steel Corporation; Alexander Fraser, president, Shell Union Oil Corporation; and M. W. Upson, chairman, Raymond Concrete Pile Company.

## Transportation Corps Seeks R. R. Mechanical Engineers

The Army's Transportation Corps is looking for some civilian railroad mechanical engineers and draftsmen—with experience involving research in the design of all types of locomotives and cars. Salaries are in the \$4,149-\$7,102 range for engineers and are \$3397 for draftsmen. Application can be made to civilian Personnel Branch, Employee Utilization Section, N. Y. Port of Embarkation, First avenue and 58th street, Brooklyn, N. Y.

## W. T. Faricy to Speak Over Radio October 28

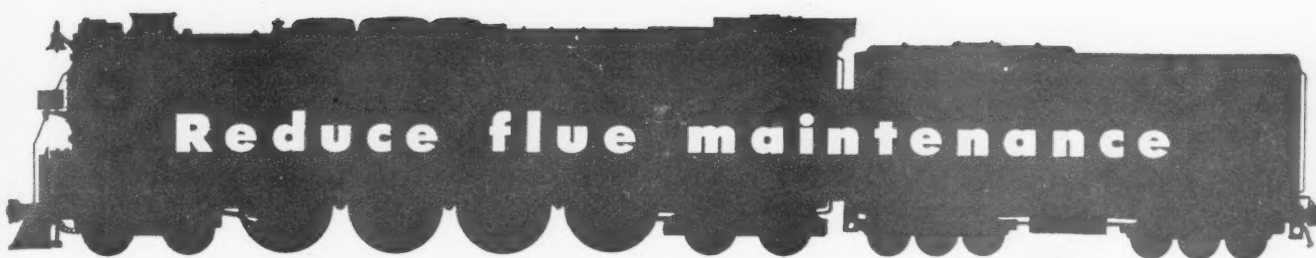
William T. Faricy, president of the Association of American Railroads, will discuss the future of the railroads over Station KSD in St. Louis, Mo., on Tuesday, October 28, from 5:15 to 5:25 p.m. This radio address will be presented in connection with the eleventh annual meeting of the National Association of Shippers Advisory Boards which will be held in St. Louis on that day.

## Newcomen to Honor S. O. Dunn

Samuel O. Dunn, editor of *Railway Age* and chairman of the Simmons-Boardman Publishing Corporation, will be guest of honor and major speaker at the annual dinner of The Newcomen Society in North America at the University Club, Chicago, the evening of November 6. Mr. Dunn will present a paper entitled "One Hundred Years Development of Railroads in the Chicago Area."

Mr. Dunn will be introduced by Ralph Budd, president of the Chicago, Burlington & Quincy. This railroad has arranged an





## **on existing locomotives**

From the point of view of saving in flue maintenance, as well as improvement in steaming qualities, the installation of Security Circulators in existing steam locomotives will prove a profitable investment.

Security Circulators are suitably proportioned to the size and type of boiler to give the best results in bettering boiler performance and increasing locomotive availability.

**AMERICAN ARCH COMPANY, Inc.**

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

inspection trip of Chicago terminals starting the morning of November 6.

### Consolidated Southwestern Cases

Division 3 of the Interstate Commerce Commission has issued a 32nd supplemental report of the commission in No. 13535, Consolidated Southwestern Cases, and related proceedings. The stated purpose of the report, dated October 8, is to treat "numerous modifications" of the original decision which had been authorized by orders but not covered in previous supplemental reports. The rates required by the original decision were established on July 14, 1928.

### Status of Port of Tacoma

Division 3 of the Interstate Commerce Commission has found that switching services performed by the Port of Tacoma, an ocean terminal operated by Pierce County, Wash., are not those of a common carrier subject to the Interstate Commerce Act. The report in No. 29628 expressed the division's view that switching services performed by the Port in connection with its own operations as an ocean terminal are those of a wharfinger, as defined in *Status of Wharfingers*, 251 I. C. C. 613, and switching services for industries within the Port area, performed without allowance or compensation, are those of a private carrier.

### Bossemeyer Heads Department of Interior Travel Division

J. Lee Bossemeyer has been appointed chief of the U. S. Travel Division, which is being reestablished as a unit of the National Park Service in the Department of the Interior. Mr. Bossemeyer formerly headed the San Francisco, Cal., field office of the division's predecessor, which was called the U. S. Travel Bureau.

## Financial

**BALTIMORE & OHIO.—Equipment Trust Certificates.**—This road has applied to the Interstate Commerce Commission for authority to assume liability for \$2,840,000 of Series W equipment trust certificates, the proceeds of which will be applied toward the purchase of 1,000 50-ton, open-top steel hopper cars to be constructed by the Bethlehem Steel Company at an estimated unit cost of \$3,550. The certificates, to be dated November 1 and sold on the basis of competitive bidding, would mature in 10 annual installments of \$284,000 each, starting November 1, 1948.

**CHICAGO, ROCK ISLAND & PACIFIC.—Reorganization.**—Division 4 of the Interstate Commerce Commission has approved \$810,350, in the event of the organization and qualification of a new corporation, or \$469,694 if the existing debtor is used as the reorganized company, as the maximum limit of allowances and expenses, exclusive of attorney fees and expenses, to be incurred by the reorganization committee in connection with the reorganization of

this road. At the same time, the commission overruled a motion filed August 19 on behalf of C. H. Harrison, Jr., and others, as the protective committee for the debtor's 7 per cent and 6 per cent preferred stock, to either continue without date a hearing upon the reorganization committee's petition or to deny the petition.

The protective committee had requested that the hearing be reset only in the event that the Supreme Court of the United States sustained the judgment and order of the United States Circuit Court of Appeals for the Seventh Circuit approving the plan. As noted elsewhere in this issue, the Supreme Court this week upheld the findings of the Circuit Court. The protective committee, meanwhile, had contended that the district court's order of June 28, 1946, referring the plan back to the commission, resulted in the courts losing all jurisdiction over the plan. The protective committee also held that the commission's only jurisdiction was to consider modifications of the plan or the proposal of new plans and that it was without jurisdiction to grant the reorganization committee's petition.

**CHICAGO RIVER & INDIANA-CHICAGO JUNCTION.—Union to Intervene in Injunction Suit.**—The federal district court at Chicago has granted the Brotherhood of Railroad Trainmen permission to intervene in the case wherein eight eastern railroads were, on March 15, 1946, granted an injunction against the C. R. & I. and the C. J., prohibiting the latter roads from continuing operating practices instituted as settlement of a strike threat by the union. The complaining carriers charge that the change damaged them to the amount of \$10.96 per car of outbound loaded livestock and that the strike settlement deprived them of trackage rights granted in an Interstate Commerce Commission order of 1922. The practices in question call for, among other things, the movement by C. R. & I. and C. J. crews of freight cars normally handled by crews of the eastern lines (See *Railway Age* of February 23, 1946, page 414).

**CHICAGO & EASTERN ILLINOIS.—Equipment Trust Certificates.**—This road has applied to the Interstate Commerce Commission for authority to assume liability for \$3,450,000 of Series E. equipment trust certificates. The certificates, to be dated November 1 and mature in 30 equal semi-annual installments starting May 1, 1948, would be applied toward the purchase of the following equipment:

Description and Builder	Estimated Unit Price
7 lightweight passenger coaches (Pullman-Standard Car Manufacturing Company) .....	\$ 82,715
1 lightweight mail-baggage coach (Pullman-Standard) .....	103,275
1 lightweight dining car (Pullman-Standard) .....	137,400
1 lightweight baggage-luncheon-lounge car (Pullman-Standard) .....	118,200
1 lightweight observation-parlor car (Pullman-Standard) .....	137,400
500 50-ton all-steel open-top hopper cars (Pullman-Standard) .....	3,280
200 50-ton all-steel box cars (American Car & Foundry Co.) .....	4,030
25 50-ton all-steel flat cars (A. C. & F.) .....	(No Price Listed)
6 1,500-hp. Diesel-electric road locomotives (Electro-Motive Division, General Motors Corporation) .....	159,166

**CHESAPEAKE & OHIO.—Equipment Trust Certificates.**—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for \$5,300,000 of 1¾ per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of 1,700 all-steel freight cars, including 1,000 50-ton box cars and 700 70-ton hopper cars, at an estimated cost of \$6,745,220. The box cars will be built by the Pullman-Standard Car Manufacturing Company and the hoppers by the American Car & Foundry Co. The certificates will be dated October 15 and mature in 10 equal annual installments of \$530,000, starting October 15, 1948. The report also approves a selling price of 99.545 with a 1¾ per cent interest rate, the bid of Halsey, Stuart & Co., and 16 associates, which had been accepted subject to commission approval, and on which basis the average annual cost will be approximately 1.84 per cent.

**GULF, MOBILE & OHIO.—Bond Interest.**—The directors of this road have announced that interest on the general mortgage income bonds Series A, due 2015, and Series B, due 2044, will be paid on April 1, 1948, for the calendar year 1947, at the rate of 5 per cent per annum on Series A and 4 per cent per annum on Series B.

**KANSAS CITY SOUTHERN.—Equipment Trust Certificates.**—This road has sold, subject to approval by the Interstate Commerce Commission, \$1,760,000 of Series H equipment trust certificates to Harris, Hall & Co. on a bid of 100.5567 for an annual interest rate of 2½ per cent. Proceeds of the sale will be applied toward the purchase, at \$542,860 each, of 3 Diesel-electric freight locomotives, each consisting of 4 1,500-hp. units, and 2 Diesel-electric passenger locomotives (each consisting of 2 1,500-hp. units) at \$293,742 each. This equipment was erroneously described in the *Railway Age* of October 11, page 81, as 3 1,500-hp. Diesel-electric freight locomotives and 2 1,500-hp. Diesel-electric passenger locomotives. The freight locomotives already are in service.

**MISSOURI-KANSAS-TEXAS.—Adjustment Mortgage Interest.**—The directors of this road on September 15 decided that no interest would be paid October 1, on the adjustment mortgage 5 per cent Series A bonds, due 1967. On April 1, 2½ per cent interest was paid against semi-annual Coupon No. 35, which was dated April 1, 1940. Unpaid interest now amounts to 37½ per cent.

### Average Prices Stocks and Bonds

	Oct. 21	Last week	Last year
Average price of 20 representative railway stocks ..	49.28	48.67	48.33
Average price of 20 representative railway bonds ..	87.46	87.33	88.93

### Dividends Declared

Atlantic Coast Line.—\$1.00, quarterly, payable December 12 to holders of record November 4.  
Louisville & Nashville.—88¢, quarterly, payable December 12 to holders of record November 3.  
Northern of New Hampshire.—\$1.50, quarterly, payable October 31 to holders of record October 16.  
Western Maryland.—7% 1st preferred (accum.), \$7.00, payable December 1 to holders of record November 15.  
Western of Alabama.—\$2.00, payable December 12 to holders of record December 5.

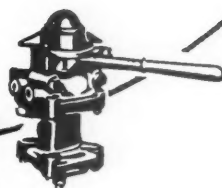


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**Throttle Control**

**...the THROTTLE MASTER**



By eliminating the conventional cab throttle lever assembly and reach rods, the THROTTLE MASTER reduces dead weight by 100 to 150 lb.

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INCORPORATED**

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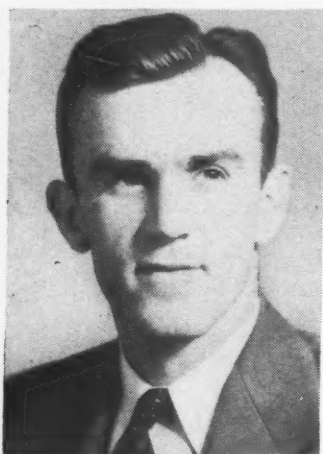
## Supply Trade

**E. W. Deck**, formerly general manager of the Trent Tube Manufacturing Company, has been appointed manager of the Ithaca, N. Y., plant of the **Morse Chain Company**, a division of the Borg-Warner Corporation, effective November 15.

The Rapids-Standard Company has announced the appointments of three new regional sales managers, as follows: **S. C. Tom Lloyd**, formerly direct factory representative at Toledo, Ohio, has been appointed southwestern regional sales manager at New Orleans, La.; **John Kramer**, formerly with the Standard Oil Company, has been appointed midwestern regional sales manager and **Plin Mears**, formerly manager of the Turret truck division of Salsbury Motors, Inc., has been appointed western regional sales manager.

The Elastic Stop Nut Corporation of America, Union, N. J., has announced its purchase of a majority stock interest in the **Buchanan Electrical Products Corporation**, Elizabeth, N. J.

**Paul S. Park** has been appointed manager of the engineering service department of the **A. M. Byers Company**, Pittsburgh, Pa. Mr. Park has been with the



Paul S. Park

company nearly four years and during world war II, served as an officer in the Army Air Forces.

**H. L. Gebhard**, general Diesel locomotive foreman of the Illinois Central, at Chicago, has been appointed a sales engineer of **Fairbanks, Morse & Co.** at the latter city. **C. B. O'Neil**, manager of the firm's railroad department at St. Louis, Mo., has been placed in charge also of sales of Diesel locomotives in the St. Louis area and the southwest. He succeeds to the duties of **Frank Ross**, who has resigned to enter into business for himself as an agent for railway equipment manufacturers.

**Stewart J. Cort** has been appointed vice-president in charge of steel division operations of the **Bethlehem Steel Company**, to succeed **Quincy Bent** who will retire on November 1. Mr. Bent will

continue as vice-president in an advisory and consulting capacity and as a director of the corporation until December 31.



Stewart J. Cort

After graduating from Lehigh University in 1906, Mr. Cort began his business career at the Duquesne, Pa., plant of the Carnegie Steel Company, where he remained until 1916 when he joined the Midvale Steel and Ordnance Company. In 1917 he was appointed superintendent of the Saucon Open Hearth division of the Bethlehem, Pa., plant of Bethlehem Steel and, in 1922, superintendent of the entire Saucon division. Mr. Cort was appointed general manager of the Sparrows Point, Md., plant in 1928, which position he held at the time of his recent appointment.

Mr. Bent was graduated from Williams College in 1901 and, immediately after graduation, joined the Pennsylvania Steel Company. He was appointed assistant to the president of the Maryland Steel Com-



Quincy Bent

pany (a Pennsylvania Steel subsidiary) in 1909, and general manager of its Steelton, Pa., plant in 1916, the year in which Bethlehem Steel acquired Pennsylvania Steel. Mr. Bent has served in the capacity of vice-president in charge of operations for Bethlehem since his appointment to that position in 1918.

**William M. Kinney**, vice-president for promotion of the **Portland Cement Association**, at Chicago, has retired.

## OBITUARY

**Albert L. Blatti**, chief engineer of the Railways Ice Company, at Chicago, died in that city on October 18.

## Equipment and Supplies

### LOCOMOTIVES

The UNION PACIFIC has ordered five 2,000-hp. Diesel-electric locomotives from Fairbanks, Morse & Co., at an estimated cost of \$870,000. These units are expected to be delivered before the end of the year.

### FREIGHT CARS

The BALTIMORE & OHIO is inquiring for 2,000 70-ton hopper cars.

The CHICAGO, INDIANAPOLIS & LOUISVILLE has ordered 100 50-ton box cars from the Pressed Steel Car Company. Fifty of these cars will be of the standard type and 50 will have perforated linings. Delivery is scheduled for the first quarter of 1948. An inquiry for this and other equipment was reported in the *Railway Age* of March 15, page 573.

The DENVER & RIO GRANDE WESTERN has ordered 15 50-ton tank cars from the General American Transportation Corporation. Delivery of these cars is scheduled for the second quarter of 1948.

The KANSAS CITY SOUTHERN has ordered 500 70-ton gondolas from the Pullman-Standard Car Manufacturing Company, delivery of which is expected to begin in July, 1948.

The NEW YORK CENTRAL SYSTEM has ordered 2,000 55-ton self-clearing hopper cars from the Despatch Shops and 1,000 70-ton self-clearing hopper cars from the Greenville Steel Car Company at a cost of about \$11,000,000. The 70-ton cars are for the Pittsburgh & Lake Erie. An inquiry for this equipment was reported in the *Railway Age* of September 27.

### PASSENGER CARS

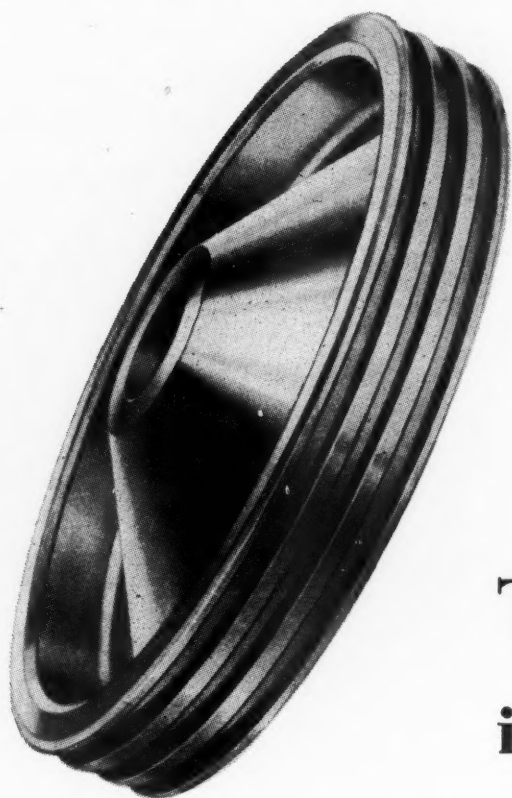
SKF INDUSTRIES, INC., has announced the receipt of orders calling for the installation of 2,000 roller bearing journal boxes on 250 subway cars being built for the New York subway system by the American Car & Foundry Co. Use of the all-welded steel journal boxes, the announcement said, will permit the saving of about 400 pounds in unsprung weight for each car.

### SIGNALING

The NEW YORK CENTRAL has ordered equipment from the General Railway Signal Company for the installation of an all-relay electric interlocking at Marcy, Ohio. Twelve electric switch machines and 15



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Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for Diesel and other services. Double Seal rings are cast from Hunt-Spiller *Air Furnace Gun Iron*.

**R**AILROAD people think naturally of any Hunt-Spiller product as being of highest quality. For more than a generation they have shown this by their overwhelming choice of Hunt-Spiller Gun Iron for valve and cylinder bushings and other vital parts of steam locomotives. So when we first offered our own light weight steel alloy pistons, we could not help but feel that they had to be the best product we—or anyone else—knew how to make. We think we succeeded. Hunt-Spiller Light Weight Steel Pistons are performing with complete satisfaction on modern steam locomotives the country over, notably on the S-Class Niagaras on the New York Central. Hunt-Spiller Mfg. Corporation, 383 Dorchester Ave., Boston 27, Mass. In Canada: Joseph Robb & Co., Ltd., 4050 Namur St., Montreal 16, P.Q. Export Agents: International Ry. Supply Co., 30 Church St., New York 7.

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DUPLEX SECTIONAL PACKING  
AIR FURNACE GUN IRON**

signals will be controlled from an 18-in. by 40-in. control panel, equipped with an illuminated track diagram, 16 track-indication lamps and 19 miniature levers. Type B plug-in relays will be used.

## Organizations

A meeting of the **Northwest Car Men's Association** will be held on November 3 at 8 p.m. at the Midway Club, St. Paul, Minn. A paper entitled "There Will Be New Developments in Journal Box Packing" will be presented by R. W. Miller of the Miller Waste Mills, Inc.

A meeting of the **New England Railroad Club** has been scheduled for November 12 at the Hotel Vendome, Boston, Mass., at 6:30 p.m. J. B. Akers, chief engineer, Southern, will present a paper entitled "What's the Answer?"

The **Western Railway Club** will meet at the Hotel Sherman, Chicago, on November 17 at 6 p.m. C. R. Harding, president of the Pullman Company, will be the guest speaker.

The **Maintenance of Way Club of Chicago** will hold its first fall meeting on October 27, at Harding's Restaurant in the Fair store, at Adams, State and Dearborn streets.

## Car Service

I. C. C. Service Order No. 784, effective from October 23 until November 30 unless otherwise modified, requires that all railroads "shall send home empty at once all box cars of Canadian ownership in accordance with the Association of American Railroads Code of Car Service Rules except those box cars now under load or being loaded or which can immediately be loaded direct to Canadian destinations." Amendment No. 1, also effective October 23, added to the order provisions for special or general permits "to meet exceptional circumstances," and named A. H. Gass, director of the Railway Transport Department, Office of Defense Transportation, as permit agent. This matter was also the subject of a September 22 circular of the Car Service Division, A. A. R., which requested transportation officers to take action "to stop the misuse" of Canadian box cars in this country and "to insure the prompt and proper movement" of such cars to Canada (see *Railway Age* of September 27, page 74).

I. C. C. Service Order No. 782, effective from October 22 until April 30, 1948, unless otherwise modified, places an embargo against the McKinney Grain Company of McKinney, Tex. While there are provisions for permits to be issued by the commission's service agent at Houston, Tex., the order's basic requirements are that no railroad "shall accept from shippers a car

or cars loaded with freight consigned or reconsigned direct to, or advise McKinney Grain Company; nor shall [any railroad] deliver or place for delivery such car or cars consigned . . . to . . . McKinney; nor shall [any railroad] accept orders for a car . . . to be placed for loading by McKinney . . . its agents or employees at any point or station within the territorial limits of the United States." In laying the basis for the order, the commission asserted that McKinney loaded a car with 24,100 lb. of hay on July 21; and that "since that time said car has been diverted 10 times after which it arrived Skidmore, Tex., on October 10, after having been diverted in a circle of approximately 3,000 miles within the state of Texas and held under load 82 days."

I. C. C. Service Order No. 781, effective from October 20 until April 30, 1948, unless otherwise modified, reinstates restrictions against reconsignment of hay as formerly embodied in Service Order No. 293 which was in effect during 1945. The order prohibits railroads from permitting any car loaded with hay to be reconsigned or diverted more than twice before arrival at destination; or to have at destination (or within the switching limits thereof) more than one change in the name of consignor or consignee, more than one change in the place of unloading, or both if included in a single order. A change in the name of a consignor or consignee en route without a change in route or destination is not to be considered a diversion or reconsignment under the terms of the order.

The I. C. C. has denied a petition which the Missouri Pacific filed recently to request "that a service order be issued limiting the free time at all ports to two days or such other time as may be found reasonable." The denial order, dated October 15, was entered by the commission's Division 3.

## Construction

### \$6 Million For C.T.C. on U. P.

The Union Pacific is installing centralized traffic control between Salt Lake City, Utah, and Caliente, Nev.—a distance of 329 mi.—at a cost of \$6,000,000. G. F. Ashby, president of the railroad, announced recently. The new installation will be completed next year, and will connect with 300 mi. of c.t.c. now in operation between Caliente and Daggett, Cal.

In connection with the program, the Paulsen Construction Company is building, at Salt Lake City, a one-story, fireproof, air-conditioned structure, 40 ft. by 72 ft., to house the U. P. chief dispatchers' offices, machine room and general offices. The building and installation of its equipment will cost \$130,000.

The U. P., in announcing the new project, listed costs of previous c.t.c. installations as follows: Daggett to Caliente, \$2,800,000; Rieth, Ore., to La Grande, \$1,189,000; Pocatello, Idaho, to Glenns Ferry, \$2,055,000; and La Grande, Ore., to Huntington, \$1,350,000.

## Railway Officers

### EXECUTIVE

**Thomas F. Powers**, assistant to the vice-president-mechanical, of the Chicago & North Western, will retire on November 1, after 47 years of service with the railroad.

**Robert S. Macfarlane**, whose election as executive vice-president of the Northern Pacific, with headquarters at Seattle, Wash., was reported in the *Railway Age* of October 4, was born on January 15, 1899, at Minneapolis, Minn., and received his higher education at Brown University and the University of Washington. He received his law degree from the latter institution in 1922, and shortly thereafter became chief deputy prosecuting attorney for King County, with headquarters at Seattle. He was associated with a law firm from 1925 to 1930, and in the latter year he became judge of the King County



**Robert S. Macfarlane**

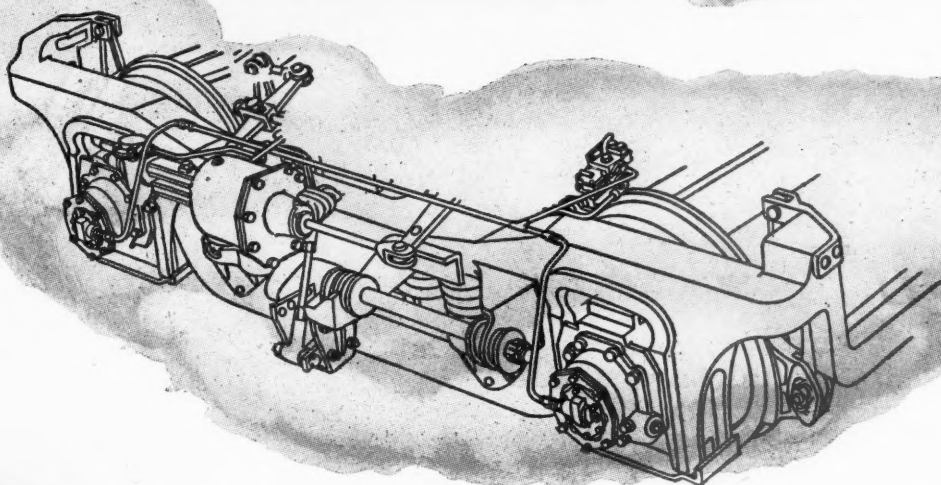
Superior Court. In 1934, Mr. Macfarlane joined the N. P. as assistant western counsel, advancing to western counsel in 1937. He was appointed also assistant to the president in 1940, and was elected also vice-president in 1943. Mr. Macfarlane, who was serving in these capacities at the time of his recent election, will retain his position as western counsel for the railroad. He is also an officer and a director of a number of concerns.

### OPERATING

**G. E. Rollins**, superintendent transportation of the Atlantic Coast Line with headquarters at Savannah, Ga., has been appointed general superintendent of the Western division, with headquarters at Atlanta, Ga. **J. C. Mixon** has been appointed superintendent transportation of the Northern division at Savannah. **W. D. Quarles, Jr.**, road foreman of engines at Florence, S. C., has been appointed trainmaster of the Columbia district, with the same headquarters.

**F. A. Chase** has been appointed trainmaster of the Pennsylvania division of the New York Central at Jersey Shore, Pa.





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What new comforts are *your* new trains going to offer overnight travelers? The answer has a lot to do with future patronage.

When you're aiming for the tops in *smooth* service, it's important to give extra thought to the brakes. Westinghouse "HSC" electro-pneumatic brake equipment is made-to-measure for the job. It sets new standards in fast, positive, smooth deceleration that lets the engineer govern stops and slow-downs with precision slack control. It permits

substantial improvements in schedules, too... important in any railroad's current plans. For your modern passenger equipment, this modern braking combination is recommended:

"HSC" Electro-Pneumatic Brake... for brake flexibility to match modern train speeds, and unequaled smooth action. Speed Governor Control... for regulating brake forces to wheel speeds. "AP" Decelostat... for wheel slip detection to keep the wheels rolling.



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W I L M E R D I N G , P A .

**Lawrence Richardson**, whose appointment as assistant general manager (operations) of the New York, Susquehanna & Western at Paterson, N. J., was reported in the *Railway Age* of August 30, was born at Shelbyville, Ky., on July 11, 1889. Mr. Richardson attended the University of Illinois and received his M. E. degree in 1910 from Cornell University. He entered railroad service in 1907 as regular apprentice with the Pennsylvania at Altoona, Pa. Mr. Richardson became special apprentice at Altoona in 1910; motive power inspector at Pittsburgh, Pa., in 1913 and foreman at Driftwood and Phillips-ton, Pa., in 1916, all with the P. R. R. During 1917 and 1918 he was with the Thomas-Morse Aircraft Corp., Cornell University, Cornell Ground School, U. S.



**Lawrence Richardson**

Army, and during 1918 and 1919, U. S. Naval Aviation, Massachusetts Institute of Technology, Cambridge, Mass., and Columbia University, New York. In 1919 Mr. Richardson went with the U. S. Railroad Administration, serving as assistant supervisor of equipment and supervisor of equipment, and in 1921 he became sales engineer working on the Virginian railway for the American Steel Foundries Co. He was in charge of railroad sales for the Whiting Corp. in 1923-24, then becoming contracting engineer for the Dwight P. Robinson Co. In 1926 Mr. Richardson went with the Boston & Maine as assistant to chairman of the executive committee, becoming assistant to president of that road the following January and mechanical superintendent in April, 1927. He was appointed chief mechanical officer in 1929 and in 1933 he became mechanical assistant to vice-president and general manager of the B. & M. and mechanical assistant to general manager of the Maine Central, which positions he held until September 1, when he went with New York, Susquehanna & Western as assistant general manager.

**F. B. Noonan** has been appointed train-master of the Illinois Central, with headquarters at Carbondale, Ill., succeeding the late **E. C. Harper**.

**H. H. Precht**, secretary and statistician in the office of the vice-president and general manager, Missouri-Kansas-Texas, at Dallas, Tex., has been appointed superin-

tendent of stations and claim prevention, succeeding **W. T. Peyton**, who has retired.

## TRAFFIC

**C. G. Blake** has been appointed assistant general freight and passenger agent of the Quebec Central and the Quebec Central Transportation Company at Sherbrooke, Que., succeeding **W. E. A. Brooks**, who has retired under the pension rules of the company after 42 years of service.

**C. I. Allen** has been appointed general agent, freight traffic department of the Atlantic Coast Line at Gainesville, Fla.

**A. J. Howard** has been appointed general agent of the Chicago Great Western, with headquarters at Kansas City, Mo.

**Harris R. Richards**, whose promotion to general freight agent of the Bessemer & Lake Erie at Pittsburgh, Pa., was reported in the *Railway Age* of October 11, was born at Hilliards, Pa., on August 21, 1902. Entering railroad service on July 26, 1918, as station clerk with the B. & L. E., at Argentine, Pa., Mr. Richards



**Harris R. Richards**

served successively as clerk and as relief station agent at various stations until October 1, 1924, when he became tariff clerk. He held the latter position until June 17, 1940, when he was appointed chief rate and percentage clerk. On June 1, 1945, Mr. Richards was appointed assistant general freight agent at Pittsburgh, which position he held until his recent promotion to general freight agent.

The Great Northern will establish a freight and passenger office at Sioux City, Iowa, on November 1, with **A. L. Lauser** as general agent.

**Benjamin G. Brink**, whose retirement as general freight agent of the Bessemer & Lake Erie at Pittsburgh, Pa., was reported in the *Railway Age* of October 11, was born at Meadville, Pa. He entered railroad service as a clerk at Albion, Pa., with the Bessemer & Lake Erie and subsequently held a similar position at Bessemer, Pa., until September, 1906, when he transferred to the freight traffic department at Pittsburgh. He was assistant

rate clerk, rate clerk, chief rate and percentage clerk, successively, until June 16, 1940, when he became assistant general freight agent. Mr. Brink was promoted to general freight agent on June 1, 1945, which position he held until his retirement.

**Edward J. Hawerkost**, whose retirement as general western passenger agent of the Erie, at Chicago, was reported in the *Railway Age* of October 18, was born in that city on February 18, 1887, and entered railroad service with the Erie in 1909. He served subsequently as a junior stenographer and prepaid clerk until 1910, when he became assistant city passenger agent. In 1918 he was appointed city ticket agent, and in 1921 he was promoted to traveling passenger agent. Mr. Hawerkost was advanced to city passenger agent in 1923 and to general western passenger agent in 1928.

**McElvey L. Corbett**, general agent of the Illinois Central, at Atlanta, Ga., will become assistant general freight agent, with headquarters at Memphis, Tenn., on November 1, succeeding **Sidney L. Nunnelly**, who has retired at his own request because of ill health.

## ENGINEERING & SIGNALING

**H. F. Reilly**, division engineer of the Lehigh Valley at Jersey City, N. J., has been appointed engineer maintenance of way at New York, N. Y. **C. W. Baker**, supervisor of bridges and buildings at Buffalo, N. Y., has been appointed division engineer at Jersey City.

**C. T. Blume** has been appointed general supervisor of work equipment of the St. Louis-San Francisco, with headquarters at Springfield, Mo.

## OBITUARY

**John W. Taylor**, one-time vice-president in charge of purchases and stores of the Chicago, Milwaukee & St. Paul (now Chicago, Milwaukee, St. Paul & Pacific), who retired in 1925, died at his home in Chicago on October 19.

**Walter S. Greenlaw**, assistant general attorney of The Pullman Company, at Chicago, died suddenly of a heart attack on October 16, at his home in that city.

**John J. Grogan**, general agent of the Minneapolis & St. Louis, with headquarters at Chicago, died at St. Luke's hospital in that city on October 17.

**Samuel Bacon Murdock**, who was general passenger agent of the Seaboard Air Line at New York from May, 1930, until May of this year, died on October 16 at Polyclinic hospital, New York, after an illness of several months. Mr. Murdock was 65 years old, having been born on February 11, 1882, at Philadelphia, Pa. He entered railroad service in 1898 as an office boy with the Florida Central & Peninsular, which was absorbed by the Seaboard Air Line in 1900.



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October 25, 1947

75

# Freight Operating Statistics of Large Steam Railways—Selected

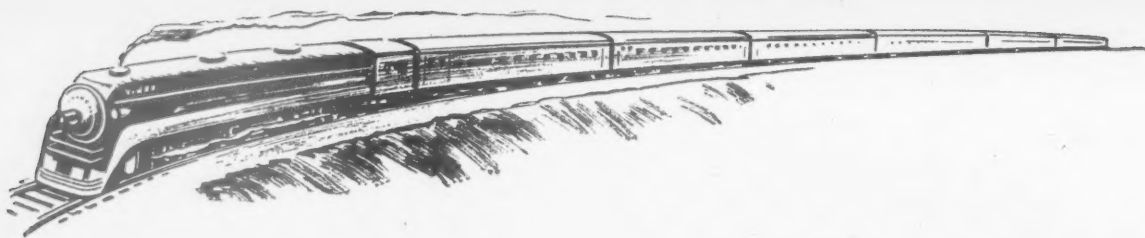
Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles		Car-miles		Ton-miles (thousands)		Road locos. on line					
			Principal and helper	Light	Loaded (thousands)	Per cent loaded	Gross excl. locos. & tenders	Net-rev. and non-rev.	Serviceable		B. O.	Per cent B. O.		
									Unstored	Stored				
<b>New Eng. Region</b>														
Boston & Albany .....	1947	362	140,453	149,073	15,634	3,069	62.6	201,214	82,745	59	4	27	30.0	
1946	362	147,287	162,482	22,178	3,360	63.3	210,089	81,802	59	2	29	33.0		
Boston & Maine .....	1947	1,750	301,268	307,620	10,773	10,785	70.1	660,947	278,363	99	2	12	10.6	
1946	1,750	314,609	328,880	18,697	11,390	71.2	688,160	297,128	106	16	14	10.6		
N. Y., New H. & Hartf* .....	1947	1,820	341,725	503,324	42,764	12,488	69.8	743,242	322,668	185	1	44	18.1	
1946	1,820	384,176	527,838	45,330	14,876	70.8	869,521	375,498	194	14	63	23.4		
<b>Great Lakes Region</b>														
Delaware & Hudson .....	1947	794	264,504	312,701	27,936	11,018	69.9	764,570	405,193	111	47	31	16.4	
1946	846	269,155	322,846	33,230	11,413	65.2	803,483	408,622	112	67	30	14.4		
Del., Lack. & Western .....	1947	970	310,404	349,932	41,257	12,865	69.3	851,283	389,055	112	13	14	10.1	
1946	971	320,200	361,888	45,339	13,649	70.3	889,581	397,658	114	26	32	18.6		
Erie .....	1947	2,229	752,962	797,341	57,836	35,480	65.8	2,322,691	929,584	276	19	76	20.5	
1946	2,242	753,834	802,789	67,685	36,787	66.0	2,406,843	1,007,266	262	43	83	21.4		
Grand Trunk Western .....	1947	972	307,588	316,095	2,629	9,656	66.6	635,166	283,142	63	1	12	16.0	
1946	972	280,462	290,378	2,441	9,358	68.2	598,334	261,700	70	1	7	9.0		
Lehigh Valley .....	1947	1,239	300,153	334,769	52,044	12,457	67.8	854,201	411,653	104	11	53	31.5	
1946	1,242	301,426	334,788	51,869	13,701	71.7	909,900	455,439	114	18	37	21.9		
New York Central .....	1947	10,338	3,048,264	3,262,447	223,006	108,543	63.6	7,393,203	3,359,781	1,016	56	317	22.8	
1946	10,328	3,219,721	3,440,683	227,296	119,932	62.7	8,174,728	3,668,356	1,016	55	323	23.2		
New York, Chi. & St. L. ....	1947	1,656	625,515	631,624	8,148	24,723	66.8	1,578,714	675,938	136	4	22	13.6	
1946	1,656	611,398	619,141	7,805	25,722	70.6	1,593,011	699,519	133	13	32	18.0		
Pitts. & Lake Erie .....	1947	223	97,776	101,760	181	3,984	66.5	331,935	195,859	32	2	17	34.7	
1946	229	97,057	98,077	158	3,812	66.0	320,214	188,774	33	2	19	35.2		
Wabash .....	1947	2,381	674,136	696,090	16,482	23,580	69.6	1,543,981	680,219	165	7	32	15.7	
1946	2,381	693,439	715,495	17,719	24,935	71.0	1,588,531	705,200	163	12	32	15.5		
<b>Central Eastern Region</b>														
Baltimore & Ohio .....	1947	6,100	2,042,021	2,578,790	296,474	70,064	63.1	5,246,726	2,619,809	853	9	301	25.9	
1946	6,103	2,066,806	2,581,855	292,000	72,609	65.3	5,182,366	2,584,075	824	15	321	27.7		
Central of New Jersey* .....	1947	419	82,498	90,827	14,328	3,263	68.4	237,808	122,809	49	2	29	37.2	
1946	649	161,652	187,700	49,125	7,129	71.7	434,334	230,435	92	3	58	37.9		
Central of Pennsylvania .....	1947	213	82,060	95,311	18,920	3,009	68.9	224,580	123,026	44	4	13	21.3	
1946														
Chicago & Eastern Ill. ....	1947	910	150,923	151,344	3,771	5,081	71.4	329,498	163,990	58	2	15	20.5	
1946	910	181,668	183,720	3,812	5,748	70.3	388,042	194,916	55	2	21	26.9		
Elgin, Joliet & Eastern .....	1947	391	110,261	115,614	3,612	3,330	68.4	250,706	135,828	43	8	10	16.4	
1946	392	106,358	110,666	3,163	3,240	66.3	249,100	133,587	41	4	19	29.7		
Pennsylvania System .....	1947	10,031	3,808,774	4,314,573	614,900	149,532	67.0	10,563,434	5,234,586	1,942	45	263	11.7	
1946	10,033	4,158,635	4,832,091	659,516	163,386	65.3	11,418,432	5,552,677	1,912	4	319	14.3		
Reading .....	1947	1,356	410,360	462,645	68,109	15,318	65.2	1,172,900	640,005	222	23	32	11.6	
1946	1,361	485,747	537,642	61,384	16,187	65.8	1,229,110	672,447	252	25	49	15.0		
Western Maryland .....	1947	837	204,898	244,715	34,005	6,985	63.2	578,208	320,823	160	2	9	5.3	
1946	839	203,277	244,297	36,561	6,952	63.8	575,072	323,452	142	8	13	8.0		
<b>Poca-hontas Region</b>														
Chesapeake & Ohio .....	1947	4,979	1,425,223	1,511,117	61,280	58,433	61.0	4,706,248	2,635,825	611	11	88	12.4	
1946	4,978	1,531,581	1,623,813	67,924	67,406	58.4	5,514,574	3,042,254	598	5	86	12.5		
Norfolk & Western .....	1947	2,108	671,932	712,211	46,577	29,115	59.5	2,225,289	1,209,007	267	32	23	7.1	
1946	2,139	711,400	755,176	48,806	33,022	58.0	2,853,931	1,545,103	262	52	19	5.7		
<b>Southern Region</b>														
Atlantic Coast Line .....	1947	5,556	899,118	910,976	14,983	22,135	64.9	1,458,167	649,140	361	29	58	12.9	
1946	5,552	935,471	954,102	14,812	24,087	66.0	1,574,483	709,122	377	44	32	7.1		
Central of Georgia* .....	1947	1,782	299,523	305,493	5,584	6,944	69.8	454,053	207,240	96	4	10	9.1	
1946	1,783	316,831	323,771	6,271	7,857	69.3	527,240	240,539	90	4	8	8.2		
Gulf, Mobile & Ohio .....	1947	2,846	368,607	371,857	486	15,435	73.3	1,005,092	487,375	192	12	15	6.8	
1946	2,846	494,235	549,532	2,684	16,277	75.0	1,035,193	474,070	164	36	37	15.6		
Illinois Central .....	1947	6,582	1,446,725	1,463,462	51,192	52,125	65.1	3,570,266	1,682,822	549	29	88	13.2	
1946	6,585	1,447,764	1,460,585	51,613	53,582	66.1	3,618,563	1,708,462	586	13	94	13.6		
Louisville & Nashville .....	1947	4,756	1,398,043	1,510,420	38,932	34,231	65.2	2,397,108	1,221,997	390	5	79	16.7	
1946	4,750	1,526,374	1,661,117	45,515	39,871	64.8	2,816,850	1,451,804	403	19	67	13.7		
Nash., Chatt. & St. Louis .....	1947	1,052	267,647	284,372	8,036	6,385	76.1	392,239	186,198	83	2	24	22.4	
1946	1,053	320,963	330,636	9,317	7,106	78.6	424,664	203,533	94	1	11	10.5		
Seaboard Air Lines .....	1947	4,145	733,338	768,727	12,535	20,864	67.9	1,363,317	618,082	271	16	54	15.8	
1946	4,139	745,957	780,124	11,512	21,695	70.0	1,381,371	625,814	260	16	57	17.1		
Southern .....	1947	6,451	1,556,736	1,579,321	28,711	41,476	70.0	2,579,989	1,144,462	569	18	100	14.6	
1946	6,450	2,212,238	2,250,036	36,286	51,532	68.9	3,215,795	1,437,406	616	2	104	14.4		
<b>Northwestern Region</b>														
Chi. & North Western .....	1947	8,061	1,022,018	1,057,523	28,412	33,806	68.5	2,263,951	1,014,180	345	5	122	26.1	
1946	8,062	1,072,043	1,110,435	27,582	34,807	68.5	2,328,540	992,000	365	5	135	26.7		
Chicago Great Western .....	1947	1,445	253,564	257,189	17,869	8,367	70.3	540,496	242,752	72	1	11	13.1	
1946	1,445	247,319	251,104	14,123	7,818	72.3	493,635	218,332	65	1	12	15.6		
Chi., Milw., St. P. & Pac. ....	1947	10,725	1,459,875	1,531,598	57,322	47,568	66.7	3,204,310	1,443,858	456	39	99	16.7	
1946	10,725	1,366,050	1,445,250	54,848	46,415	68.2	3,050,518	1,398,902	444	76	80	13.3		
Chi., St. P., Minneap. & Om. ....	1947	1,606	214,897	230,131	12,360	5,553	71.2							



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# Items for the Month of July 1947 Compared with July 1946

	Region, road, and year	Freight cars on line			Per Cent B. O.	G.t.m. per train-hr. and tenders		Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day	
		Home	Foreign	Total		G.t.m. per train-hr. and tenders	G.t.m. per train-mi. excl. locos. and tenders								
New Eng. Region	Boston & Albany .....	1947	229	4,742	4,971	0.2	23,411	1,444	594	27.0	511	30.3	7,373	167	66.2
	Boston & Albany .....	1946	285	5,417	5,702	0.8	22,556	1,436	559	24.3	472	30.6	7,289	182	75.3
	Boston & Maine .....	1947	1,409	10,948	12,357	2.3	33,090	2,199	926	25.8	744	41.1	5,131	105	96.1
	Boston & Maine .....	1946	1,886	12,482	14,368	2.8	32,281	2,193	947	26.1	692	37.2	5,477	102	88.6
	N. Y., New H. & Hartf* ..	1947	1,438	18,461	19,899	1.9	30,914	2,181	947	25.8	522	29.0	5,719	93	77.9
	N. Y., New H. & Hartf* ..	1946	2,600	19,968	22,568	3.6	31,051	2,269	980	25.2	558	31.3	6,655	90	75.2
	Delaware & Hudson .....	1947	2,166	7,133	9,299	3.8	53,433	2,905	1,540	36.8	1,433	55.7	16,462	100	61.0
	Delaware & Hudson .....	1946	2,620	6,592	9,212	4.8	51,694	3,001	1,526	35.8	1,352	57.9	15,581	101	57.3
Great Lakes Region	Del., Lack. & Western .....	1947	4,315	12,228	16,543	4.5	41,431	2,786	1,273	30.2	705	33.6	12,938	110	99.8
	Del., Lack. & Western .....	1946	4,782	13,729	18,511	4.3	42,414	2,817	1,259	29.1	702	34.3	13,211	108	85.7
	Erie .....	1947	5,650	24,305	29,955	3.9	51,413	3,108	1,244	26.2	985	57.2	13,453	92	79.5
	Erie .....	1946	6,763	28,723	35,486	2.8	51,468	3,212	1,344	27.4	923	51.1	14,493	92	79.3
	Grand Trunk Western .....	1947	4,327	8,968	13,295	7.8	44,158	2,079	927	29.3	682	35.0	9,397	83	144.8
	Grand Trunk Western .....	1946	4,039	9,732	13,771	8.1	43,270	2,147	939	28.0	620	32.5	8,685	84	131.7
	Lehigh Valley .....	1947	5,550	13,466	19,016	6.8	52,563	2,909	1,402	33.0	700	31.2	10,718	100	77.9
	Lehigh Valley .....	1946	5,952	13,266	19,218	6.4	50,648	3,116	1,560	33.2	736	30.9	11,829	99	78.1
	New York Central .....	1947	43,440	99,833	143,273	3.3	39,359	2,470	1,123	31.0	764	38.8	10,484	105	90.8
	New York Central .....	1946	48,530	101,597	150,127	5.1	40,251	2,578	1,157	30.6	764	39.8	11,458	99	95.2
	New York, Chi. & St. L. ....	1947	2,213	13,735	15,948	1.3	50,623	2,536	1,086	27.3	1,399	76.6	13,167	84	135.7
	New York, Chi. & St. L. ....	1946	2,182	13,780	15,962	3.1	49,908	2,623	1,152	27.2	1,465	76.3	13,626	81	120.7
	Pitts. & Lake Erie .....	1947	3,201	11,053	14,254	7.1	49,833	3,343	1,972	49.2	453	13.8	28,332	99	75.0
	Pitts. & Lake Erie .....	1946	2,767	8,613	11,380	5.4	50,026	3,309	1,950	49.5	493	15.1	26,592	86	65.4
	Wabash .....	1947	5,235	15,263	20,498	4.3	44,954	2,313	1,019	28.8	1,082	53.8	9,216	101	117.3
	Wabash .....	1946	5,320	15,905	21,225	3.2	44,159	2,315	1,028	28.3	1,063	52.9	9,554	95	120.0
Central Eastern Region	Baltimore & Ohio .....	1947	37,483	51,474	88,957	5.2	32,725	2,633	1,315	37.4	957	40.5	13,854	140	83.4
	Baltimore & Ohio .....	1946	38,088	54,106	92,194	5.9	31,986	2,566	1,280	35.6	959	41.3	13,658	140	82.5
	Central of New Jersey* ..	1947	605	10,373	10,978	3.4	36,075	2,969	1,533	37.6	359	13.9	9,455	125	62.4
	Central of New Jersey* ..	1946	3,910	11,846	15,756	6.6	31,868	2,782	1,476	32.3	466	20.1	11,454	119	65.2
	Central of Pennsylvania ..	1947	1,077	3,717	4,794	8.8	38,990	2,847	1,560	40.9	820	29.1	18,632	126	70.6
	Central of Pennsylvania ..	1946	1,434	4,693	6,127	5.6	35,920	2,238	1,114	32.3	867	37.6	5,813	105	71.7
	Chicago & Eastern Ill. ....	1947	1,823	4,454	6,277	6.2	36,992	2,204	1,107	33.9	1,038	43.5	6,909	102	81.1
	Chicago & Eastern Ill. ....	1946	1,823	4,454	6,277	6.2	36,992	2,204	1,107	33.9	1,038	43.5	6,909	102	81.1
	Elgin, Joliet & Eastern .....	1947	5,863	9,962	15,825	2.4	18,937	2,420	1,311	40.8	272	9.8	11,206	126	89.1
	Elgin, Joliet & Eastern .....	1946	8,104	8,689	16,793	2.0	20,203	2,487	1,334	41.2	248	9.1	10,993	132	79.8
	Pennsylvania System .....	1947	115,653	129,781	245,434	10.6	38,227	2,870	1,422	35.0	693	29.6	16,834	121	76.6
	Pennsylvania System .....	1946	117,210	134,809	252,019	8.4	37,154	2,847	1,384	34.0	710	32.0	17,853	120	86.2
	Reading .....	1947	8,572	23,458	32,030	3.5	35,252	2,860	1,561	41.8	635	23.3	15,225	100	69.5
	Reading .....	1946	9,094	23,125	32,219	3.3	32,792	2,536	1,388	41.5	657	24.0	15,938	108	69.9
	Western Maryland .....	1947	2,779	6,429	9,208	1.1	30,142	2,877	1,596	45.9	1,160	39.9	12,365	145	57.6
	Western Maryland .....	1946	2,976	4,296	7,272	.9	31,980	2,874	1,617	46.5	1,359	45.8	12,436	150	60.3
Potomac Region	Chesapeake & Ohio .....	1947	46,889	30,738	77,627	1.4	53,221	3,349	1,875	45.1	1,075	39.1	17,077	78	77.0
	Chesapeake & Ohio .....	1946	42,996	37,308	80,304	2.2	54,183	3,658	2,018	45.1	1,257	47.7	19,714	74	86.1
	Norfolk & Western .....	1947	28,075	7,879	35,954	2.0	54,768	3,361	1,826	41.5	1,072	43.4	18,501	101	82.5
	Norfolk & Western .....	1946	25,505	7,968	33,473	1.9	63,462	4,066	2,201	46.8	1,477	54.5	23,302	84	83.5
Southern Region	Atlantic Coast Line .....	1947	7,842	17,415	25,257	5.0	26,667	1,624	723	29.3	801	42.1	3,769	120	71.3
	Atlantic Coast Line .....	1946	8,159	19,744	27,903	3.2	27,110	1,690	761	29.4	808	41.6	4,120	116	73.5
	Central of Georgia* .....	1947	1,803	5,611	7,414	4.0	28,073	1,521	694	29.8	846	40.6	3,751	137	101.0
	Central of Georgia* .....	1946	1,573	6,679	8,252	1.0	29,853	1,672	763	30.6	935	44.1	4,352	124	116.3
	Gulf, Mobile & Ohio .....	1947	2,446	12,490	14,936	1.4	49,361	2,730	1,324	31.6	1,024	44.2	5,524	50	58.4
	Gulf, Mobile & Ohio .....	1946	2,641	12,699	15,340	1.4	38,270	2,115	968	29.1	976	44.7	5,373	98	80.8
	Illinois Central .....	1947	14,326	36,316	50,642	1.3	43,482	2,542	1,198	32.3	1,044	49.7	8,247	118	77.7
	Illinois Central .....	1946	14,999	36,173	51,172	1.4	43,410	2,575	1,216	31.9	1,131	53.7	8,369	111	74.3
	Louisville & Nashville .....	1947	23,410	16,361	39,771	4.9	27,378	1,715	874	35.7	982	42.2	8,288	121	109.5
	Louisville & Nashville .....	1946	26,164	18,970	45,134	3.7	29,076	1,845	951	36.4	1,104	46.7	9,859	121	117.6
	Nash., Chatt. & St. Louis ..	1947	821	5,548	6,369	6.1	27,761	1,471	698	29.2	914	41.2	5,709	129	93.9
	Nash., Chatt. & St. Louis ..	1946	1,088	5,435	6,523	2.8	25,159	1,330	637	28.6	979	43.5	6,235	136	111.0
	Seaboard Air Lines .....	1947	5,629	15,643	21,272	1.4	33,295	1,889	856	29.6	919	45.7	4,810	115	81.6
	Seaboard Air Lines .....	1946	5,543	16,528	22,071	1.7	31,962	1,889	856	28.8	869	43.1	4,877	119	85.0
	Southern .....	1947	13,739	29,967	43,706	6.4	28,816	1,681	746	27.6	825	42.7	5,723	127	80.0
	Southern .....	1946	14,059	34,994	49,053	3.8	24,688	1,478	661	27.9	945	49.2	7,189	137	107.0
Northwestern Region	Chi. & North Western .....	1947	19,110	42,076	61,186	3.4	32,875	2,330	1,044	30.0	575	28.0	4,058	112	81.2
	Chi. & North Western .....	1946	19,916	33,779	53,695	3.8	33,968	2,286	974	28.5	593	30.4	3,969	121	79.4
	Chicago Great Western .....	1947	1,141	5,157	6,298	2.7	34,422	2,132	958	29.0	1,205	59.1	5,419	120	110.5
	Chicago Great Western .....	1946	1,037	4,590	5,627	6.1	34,721	1,998	884	27.9	1,291	64.0	4,874	117	115.2
	Chi., Milw., St. P. & Pac. ....	1947	18,416	40,546	58,962	1.9	35,418	2,215	998	30.4	808	39.9	4,343	111	92.9
	Chi., Milw., St. P. & Pac. ....	1946	20,084	32,845	52,929	2.0	36,251	2,259	1,036	30.1	810	39.4	4,208	110	88.0
	Chi., St. P., Minneap. & Om. ....	1947	940	7,430	8,370	7.1	22,420	1,784	842	31.3	681	30.6	3,486	111	72.9
	Chi., St. P., Minneap. & Om. ....	1946	1,139	6,835	7,974	7.3	22,922	1,823	811	29.6	640	31.0	3,261	104	68.8
	Duluth, Missabe & Iron Range	1947	14,598	411	15,009	1.6	92,136	5,374	3,271	56.3	1,250	43.5	34,443	53	145.7
	Duluth, Missabe & Iron Range	1946	13,962	449	14,411	2.4	90,747	5,172	3,160	56.3	1,148	39.8	30,525	59	127.1
	Great Northern .....	1947	19,372	22,587	41,959	3.5	46,870	2,861	1,443	37.1	1,062	43.2	5,499	84	80.9
	Great Northern .....	1946	19,949	17,900	37,849	4.1	44,536	2,799	1,382	35.4	1,042	44.5	5,022	87	69.8
	Minneap., St. P. & S. St. M. ....	1947	5,597	7,816	13,413	7.4	32,782	1,							

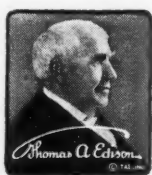


## Modern BATTERY POWER...

The new post-war passenger train cars now going into service show a pronounced trend toward better lighting, more electrical conveniences, more positive air circulation, higher refrigerating capacity and better control of humidity—all of which add up to higher electrical loads.

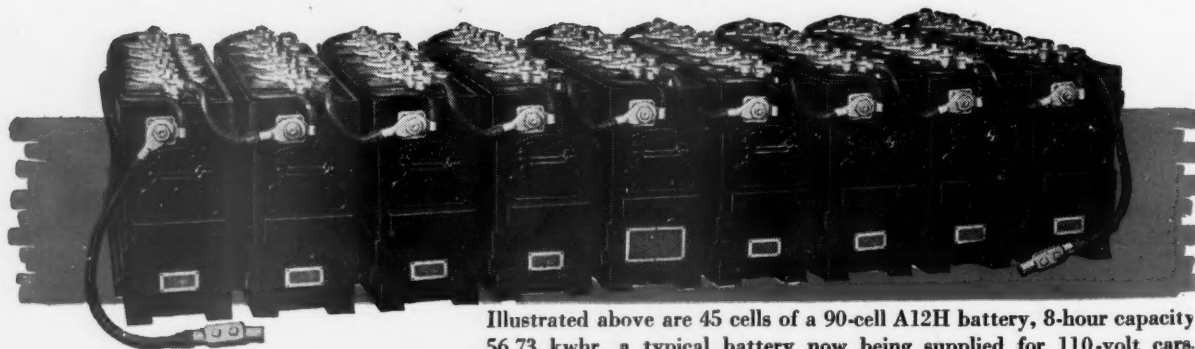
A natural result is the general adoption of higher system voltages, and higher-capacity generators and batteries. For axle-generator cars employing the electromechanical system of air conditioning, the trend is toward batteries having capacities of 55 to 65 kilowatt-hours for either 64- or 110-volt systems.

Under these circumstances EDISON Nickel-Iron-Alkaline Batteries are making greater weight savings than before. And their *inherent dependability* was never more useful because the electric power supply never played a more important part in passenger comfort. *Edison Storage Battery Division of Thomas A. Edison Incorporated, West Orange, N. J.*



# EDISON

Nickel • Iron • Alkaline  
STORAGE BATTERIES



Illustrated above are 45 cells of a 90-cell A12H battery, 8-hour capacity 56.73 kwhr, a typical battery now being supplied for 110-volt cars.